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DEPARTEMENT D'ANTHROPOLOGIE

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POST GRADUATE SCHOOL  
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\*\*\*\*\*

DOCTORAL RESEARCH  
UNIT FOR SOCIAL  
SCIENCES

\*\*\*\*\*

DEPARTMENT OF ANTHROPOLOGY

\*\*\*\*\*

**CULTURE AND SINGLE-USE PLASTICS MANAGEMENT IN  
YAOUNDE, CAMEROON  
A CONTRIBUTION TO THE ANTHROPOLOGY OF  
DEVELOPMENT**

*A thesis submitted in partial fulfilment of the requirements for the award of a Doctorat/Ph.D.  
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Presented by:

**MBANAM BAMBOT Valentine**

*Doctorat/Ph.D. in Anthropology*



**CONSTITUTION OF JURY :**

**Président :** MOUPOU Moïse, Professor

University of Yaounde 1

**Rapporteur :** KUM AWAH Paschal, Professor

University of Yaounde 1

**Membres :**

- YENSHU Emmanuel VUBO, Professor

University of Buea

- DELI TIZE Teri, Associate Professor

University of Yaounde 1

- AFU Isaiah KUNOCK, Associate Professor

University of Yaounde 1

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**To**  
**Mme Mbanam née Nkoulou Estelle Flore,**  
**And**  
**Children**

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**WARNING !**

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## ABSTRACT

The research titled "Culture and single-use plastics management in Yaounde, Cameroon: A contribution to the Anthropology of Development" delves into the management of single-use plastics (SuPs) which poses significant challenges globally, with particular relevance to urban areas such as Yaounde. This research investigates the intricate relationship between culture and SuPs management in Yaounde, providing insights into the cultural norms, traditions, and values that influence waste management practices. The main research question is what is the relation between culture and single-use plastics management in Yaounde?

The study aims to explore and understand the cultural factors influencing single-use plastic consumption and management practices in Yaounde, with the aim of identifying potential avenues for improving waste reduction and promoting sustainable alternatives. Utilizing qualitative research methods, including direct observation and in-depth, unstructured, and semi-structured interviews, data were gathered from households, streets, public administrations, waste pickers, informal and formal waste management structures, and leaders of environmental associations and NGOs. The research reveals that cultural practices and attitudes play a significant role in SuPs management, with some practices aligning with plastic ban policies while others perpetuate the proliferation of illicit plastics.

The research findings indicated a cultural shift in consumer behaviour towards thicker, reusable alternatives following the ban on SuPs. The study also highlighted the symbolic meanings of plastics in the community, where plastic bags represented convenience and modernity. Additionally, the study revealed that cultural perceptions and alternatives varied among communities, with some still using biodegradable options for packaging traditional dishes.

The research contributes to the anthropology of development by providing a nuanced understanding of how cultural dynamics intersect with environmental challenges, offering insights for the design and implementation of more culturally sensitive and effective waste management strategies in Yaounde and similar contexts.

**Keywords:** Plastic ban policy, Single-use plastics, Waste Management, Recycling, Cultural Representations

## RESUMÉ

L'étude intitulée "Culture et gestion des plastiques à usage unique à Yaounde, Cameroun : Une contribution à l'anthropologie du développement" se penche sur la gestion des plastiques à usage unique (PUU) qui pose des défis significatifs à l'échelle mondiale, avec une pertinence particulière pour les zones urbaines telles que Yaounde. Cette recherche examine la relation complexe entre la culture et la gestion des PUU à Yaounde, offrant des perspectives sur les normes, traditions et valeurs culturelles qui influencent les pratiques de gestion des déchets. La question de recherche principale est « Quelle est la relation entre la culture et la gestion des plastiques à usage unique à Yaounde ? »

Cette étude également cherche à comprendre les facteurs culturels influençant la consommation et les pratiques de gestion des plastiques à usage unique à Yaounde, dans le but d'identifier des avenues potentielles pour améliorer la réduction des déchets et promouvoir des alternatives durables. En utilisant des méthodes de recherche qualitatives, y compris l'observation directe et des entretiens approfondis, non structurés et semi-structurés, des données ont été recueillies auprès de ménages, de rues, d'administrations publiques, de récupérateurs de déchets, de structures de gestion des déchets informelles et formelles, et de leaders d'associations environnementales et d'ONG. La recherche révèle que les pratiques et attitudes culturelles jouent un rôle significatif dans la gestion des PUU, certaines pratiques étant alignées sur les politiques d'interdiction du plastique tandis que d'autres perpétuent la prolifération des plastiques illicites.

Les résultats clés suggèrent une interaction complexe entre les pratiques culturelles et la mise en œuvre des politiques, mettant en évidence les défis liés à l'application des réglementations existantes et à la communication efficace des politiques au public. Des facteurs culturels, tels que les pratiques traditionnelles et les systèmes de croyance, constituent des obstacles importants à une gestion appropriée des plastiques à usage unique, en particulier pour les individus des communautés aux ressources économiques plus faibles.

Cette recherche contribue à l'anthropologie du développement en fournissant une compréhension nuancée de la manière dont les dynamiques culturelles interagissent avec les défis environnementaux, offrant des perspectives pour la conception et la mise en œuvre de stratégies de gestion des déchets plus sensibles culturellement et plus efficaces à Yaounde et dans des contextes similaires.

**Mots-clés :** Politique d'interdiction du plastique, Plastiques à usage unique, Gestion des déchets, Recyclage, Représentations Culturelle

## ACRONYMS

<b>AJADDEC:</b>	Association des Jeunes Amis de la Défense de l'Environnement au Campus de l'Université de Yaounde I
<b>BUCREP:</b>	Bureau Central des Recensements et des Etudes de Population
<b>CAMWATER:</b>	Cameroon Water Utilities Corporation
<b>CEMAC:</b>	Communauté Économique et Monétaire de l'Afrique Centrale/ <i>Central African Economic and Monetary Community</i>
<b>CONGELCAM :</b>	Compagnie de Congélation du Cameroun
<b>COVID-19:</b>	Corona Virus Disease 2019
<b>EC-ECAM 4:</b>	Enquête Complémentaire à la quatrième Enquête Camerounaise Auprès des Ménages /Complementary Survey to the Fourth Cameroonian Household Survey
<b>FEICOM:</b>	Fonds Spécial d'Équipement et d'Intervention Intercommunale/ <i>The Special Council Support Fund for Mutual Assistance</i>
<b>HYSACAM:</b>	Hygiène et Salubrité du Cameroun/ <i>Impact of Hygiene and Sanitation in in Cameroon</i>
<b>IFORD:</b>	Institut de Formation en Recherche Démographique / <i>Institute of Demographic Training and Research</i>
<b>MINAT:</b>	Ministère de l'Administration Territoriale / <i>Ministry of Territorial Administration</i>
<b>MINDDEVEL:</b>	Ministère de la Décentralisation et du Développement Local / <i>Ministry of Decentralization and Local Development</i>
<b>MINEPAT:</b>	Ministère de l'Économie, de la Plannification et de l'Aménagement du u Territoire / <i>Ministry of the Economy, Planning and Regional Development</i>
<b>MINEPDED:</b>	Ministère de l'Environnement, de la Protection de la Nature et du Développement Durable/ <i>Ministry of Environment, Nature Protection, and Sustainable Development</i>
<b>MINESUP:</b>	Ministère de l'Enseignement Supérieur/ <i>Ministry of Higher Education</i>
<b>PADY:</b>	Projet d'Assainissement De Yaounde/ <i>Yaounde Sanitation Project</i>
<b>SOFAMAC:</b>	Société de Fabrication des Matériaux de Construction
<b>UEMOA :</b>	Union Economique et Monétaire Ouest Africaine/ <i>West African Economic and Monetary Union</i>
<b>UNEP:</b>	United Nations Environment Programme
<b>UN-HABITAT:</b>	The United Nations Human Settlements Programme

## INITIALS

<b>ADB:</b>	African Development Bank
<b>AHWO:</b>	Africa Health Workforce Observatory
<b>CO<sub>2</sub></b>	Carbon dioxide
<b>C.U.Y:</b>	Communauté Urbaine de Yaounde/ Yaounde City Council
<b>C2D:</b>	Contrat Désendettement Développement ( <i>Debt Relieve and Development Programme</i> )
<b>EPR:</b>	Extended Producer Responsibility
<b>EU:</b>	European Union
<b>GEF:</b>	Global Environmental Family
<b>GESP:</b>	Growth and Employment Strategy Paper
<b>HDI:</b>	Human Development Index
<b>HIV/AIDS:</b>	Human Immunodeficiency Virus, Acquired Immunodeficiency Syndrome
<b>IADM:</b>	Initiative de l'Allègement de la Dette Multilatérale/ <i>Multilateral Debt Rel. Initiative</i>
<b>IBRD:</b>	International Bank of Reconstruction and Development
<b>ILO:</b>	International Labour Organization.
<b>INS:</b>	Institut National de la Statistique/ <i>National Institute of Statistics</i>
<b>IOM:</b>	International Organization for Migration.
<b>LRA:</b>	Local and Regional Authorities
<b>NDS30:</b>	National Development Strategy 2020-2030
<b>NGO:</b>	Non-Governmental Organisation
<b>PE :</b>	Polyethylene or polythene
<b>PEBD:</b>	Polyethylene of Low Density
<b>PEHT:</b>	Polyethylene High Tenacity
<b>PET:</b>	Polyethylene Terephthalate
<b>PHA:</b>	Polyhydroxyalkanoates
<b>PLA:</b>	Polylactic Acid
<b>PP:</b>	Polypropylene
<b>PPE:</b>	Personal Protective Equipment

<b>PS :</b>	Polystyrene
<b>PSF:</b>	Plastic Soup Foundation
<b>SABC :</b>	Société Anonyme des Brasseries du Cameroun
<b>SDG:</b>	Sustainable Development Goals
<b>SEMC:</b>	La Société des Eaux Minérales du Cameroun
<b>SuPs:</b>	Single-use Plastics
<b>SWM:</b>	Solid Waste Management
<b>UA:</b>	Urban Agriculture
<b>UK:</b>	United Kingdom
<b>UN:</b>	United Nations
<b>UNDP:</b>	United Nations Development Programme
<b>UNEA:</b>	United Nations Environment Assembly
<b>UNFCCC:</b>	United Nations Framework Conference for Climate Change
<b>USA:</b>	United States of America
<b>WHO:</b>	World Health Organization
<b>XAF:</b>	Central African CFA Francs
<b>YCH:</b>	Yaounde Central Hospital

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## **INTRODUCTION**

This work begins by presenting the context, justification, research problem, and problem statement. It further states the main and subsequent research questions, the main and subsequent hypotheses and finally, the main and subsequent objectives. An outline of the research methodology is presented, followed by the ethical consideration, and finally, it ends with the work plan.

## **0.1. Context**

The world is grappling with a complex web of environmental crises stemming from plastic pollution (Testa, 2020). The efforts to tackle the root causes have been inadequate and uncoordinated, and have so far failed to resolve the issues (Peet et al., 2011). While plastics have revolutionized our modern world, new and often unanticipated consequences of plastics and their manufacture are continually being uncovered (Farrelly et al., 2021). Since the 1950s, plastic production has skyrocketed by 200 times, reaching 360 million tonnes, surpassing almost every other material (Callaghan et al., 2021).

The global demographic increase has led to an enormous demand for single-use plastics; as a result, plastic packaging accounts for about half of the plastic waste in the world (UNEP, 2018). SuPs are used for a short time; then they are discarded in the environment, where they end up clogging sewage, landfills, and oceans (Adkins, 2018). Common SuPs include plastic drinking bottles, plastic bottle caps, food wrappers, plastic grocery bags, plastic sachets, multi-layer packaging used for food packing, straws, and foam takeaway containers (De L. C, 2020).

In Cameroon, waste from the use of plastics constitutes about 10% of the 6,000,000 tonnes of municipal waste produced annually, i.e. about 600,000 tonnes per year (MINEPDED, 2019). This ethnographic research focuses on the relationship between two trends: single-use plastic management and implementing plastic regulations or policies in Yaounde. For global responses to remediate plastic pollution and make it more effective, policies should be tailored to local and national circumstances, which shall support regional and international cooperation (Touhey, 2019; Boustead, 1994). Like other UN member states, Cameroon has international commitments as she adhered to resolutions of global agreements like the 2030 Sustainable Development Goals, The Earth summits known as the decennial meeting, and the Stockholm Convention of 2005 (Nkemgha et al., 2020).

This research also aims to show the challenges of SuPs waste management by exploring the interrelationships of SuP manufacturers, traders, users, and waste management agents. This study reveals contradictions and biases in how these actors represent SuPs, eventually shaping post-consumer practices and policies. Global plastic production has been trending for decades;

it has even quadrupled (Ndum, 2013; Sangwon, 2019). The Annual Global polymer resin and fibre (plastics) production measured in metric tons from 1950 to 2015 has moved from 50 million to 350 million tons (Rhodes, 2018). Cameroon is not an exception, and Yaounde in particular. One can tell from the number of plastics littering the streets, vast amounts of plastic bottles floating on streams and the amount of banned plastic bags seized by the authorities yearly. Yaounde city dwellers face direct and indirect consequences from some Sup's post-consumer practices, especially those practices that do not conform to the legislation. SuPs, when dumped haphazardly, block sewage systems, causing floods on some major streets and neighbourhoods, Climate change, and Global warming in Yaounde (Essome, 2019).

To further develop this point, we can consider the Sustainable Development Goal 17 points adopted in 2015, which offers a framework for action against environmental pollution. It proposes an improvement of waste management systems in low-income countries as a way out to curb plastic waste pollution (Batagarawa, 2001; Whiteman et al., 2021). Though none of the 17 points has plastic pollution as the central theme, there is a relationship between the SDGs and the need to hamper plastic pollution. Plastic waste has been altering our ecosystem, contaminating the land, water and damaging several ecosystems (Prorokova, 2019).

Drawing from the PSF, a UN Environment Programme-accredited NGO in the Netherlands founded in 2011, a series of relationships can be highlighted among the 17 SDGs. They are listed as follows: SDG 3: Good health and well-being; SDG 6: Clean water and sanitation; SDG 11: Sustainable cities and communities; SDG 12: Responsible consumption and production; SDG 13: Climate action; SDG 14: Life below water (protection of the seas and oceans); SDG 15: Life on land (restore ecosystems and preserve diversity).

Lately, in 2017, the UN held a meeting to discuss the implementation of SDG 14. This meeting underscored underwater life and adopted the resolution, "Our Ocean, Our Future: Call for Action." In addition, all member countries that took part in the meeting agreed to execute long-term and practical plans to minimize the use of plastics and microplastics, particularly plastic bags and single-use plastics, including collaborative efforts with stakeholders at all levels to address their manufacturing, marketing, and usage (UNEP, 2018).

Haeen (2006) underscores the relevance of Anthropology in contributing to global environmental issues. He states that Anthropologists have investigated the significance of cultural practices and beliefs in allowing human populations to optimize their adaptations to their environments and preserve degraded local and regional ecosystems. From this perspective, this study attempts to decipher the culturally embedded meanings attached to SuPs management

that shape human behaviour or observable social uses in SuPs management and post-consumer practices.

Strengthening commitments to implement the 2030 Agenda and the 17 Sustainable Development Goals has become a significant preoccupation for nations around the globe (Bradford, 2016). In the year two thousand and fifteen, world leaders came together in the United Nations and adopted the 2030 Agenda for Sustainable Development (United Nations Publications, 2019). They brought out these goals in response to the common challenge to end poverty and create shared prosperity on a healthy and peaceful planet. In addition, several other agreements were signed in the same year, including the Paris Agreement under the UNFCCC (Leggett & Lattanzio, 2016). Nearly fifty per cent of the plastic waste generated globally in 2015 was plastic packaging (UNEP, 2018). SuPs are widely used for packaging by many manufacturers (Allison, 2013). Company executives, product developers, policymakers, environmental researchers, and plastics industry engineers are all under growing pressure to discover solutions to reduce the environmental impact of plastic goods (Tolinski, 2011).

The primary intention of the producers of SuPs is single-use, as its name tells it, or is intended to be used only once before they are discarded or recycled. However, they threaten wildlife on land and marine life because they are non-biodegradable. For this reason, governments worldwide are increasingly aware of the scale of plastic pollution and are taking action to implement mitigating strategies.

Plastic production has surged over the past 50 years (Boetzkes, 2019). In 2016, it reached 335 million tons per annum, with Europe alone producing 60 million tons and it is expected to double in the next 20 years (Drzyzga & Prieto, 2018). Their importance in almost every aspect of our lives cannot be overemphasized. However, unfortunately, a substantial quantity of plastic waste leaks into the environment, causing significant economic and ecological damage; for example, some 5–13 million tons of plastic (1.5–4% of global plastic production) end up in the ocean yearly (Geyer *et al.*, 2017).

The International Community, through the United Nations, has addressed this issue. Their initiative is undoubtedly essential, but even if these plastics are "reused", they inevitably become waste at some point (Farrelly *et al.*, 2021). Plastic producers and transformers are keen to highlight the benefits of plastic packaging; it delivers direct economic profits and helps prevent food waste and contamination (Coles & Kirwan, 2011).

Further, lessening the packaging weight can reduce the fuel used in transporting goods. If we close the circular economy loop, this waste needs to be seen as a resource to be plunged



back into the life cycle of plastics (PlasticsEurope, 2018). The circular economy represents an effective and sustainable waste management strategy that needs to be enhanced due to its numerous advantages in the economic or social aspects (Vergara, 2011; Finkbeiner, 2011).

Of the 25.8 million tons of plastic waste generated in Europe yearly, under 30% is collected for recycling, 31% ends up in landfills, and 39% is incinerated (European Commission, 2018). Within this context, the European Strategy for Plastics in a Circular Economy adopted on January 16th, 2018, aims to transform how plastic products are designed, produced, used, and recycled in the EU. The most challenging goals include ensuring that, by 2030, all plastic packaging in the EU should be reusable or recyclable in a cost-effective manner and that more than half of all European plastic waste is recycled (European Commission, 2018).

Many middle-income countries have reformed their legal systems addressing environmental plastic pollution (Landrigan, 2020). Many African countries have joined the wagon in drafting laws and regulations. While some are legal reforms oriented, others struggle to put better waste management systems to limit leakage and environmental damage (Vergara, 2011; Alexandre, 2007). For example, Cameroon in 2014 officially passed a law on the manufacturing, importation, commercialization, and use of less than sixty-one-micron plastic bags in conformity with Law No.96/12 of August 5 1996, on the management of the environment (Ashu, 2017).

The Government of Cameroon is in its second phase of implementing the National Development Strategy (NDS30). The NDS30 is the new reference framework for the country's development for 2020–2030. It is the second stage of the 2035 drive, which arrives on the heels of the GESP, which ended in 2019. The strategy outlines the nation's domestic and international commitments in economics, society, and the environment.

The document states that the emphasis will be on structural reform of the economy through significant adjustments to the financial, administrative, social, and environmental systems to support rapid economic growth and widespread prosperity. One of the objectives of the NDS30 is to strengthen climate change adaptation, mitigate the effects of climate change ensure environmental management that assures sustainable and inclusive economic growth and social development, and create an upstream sector for the cost-effective manufacture of basic chemicals and polymers, which is necessary for the diversification of the chemical industry into the plastics industry (NDS30, 2020). Moreover, this implies carrying on with the implementation of the 2014 ban on the manufacturing and importation of plastics of less than 60 microns.

As part of the implementation of the program to combat pollution, nuisances, harmful and dangerous chemical substances throughout the national territory, the Ministry of the Environment, Nature Protection and Sustainable Development (MINEPDED) has put in place a legal arsenal to fight against pollution in general and the proliferation of non-compliant plastic packaging in particular, Joint Order No. 004 MINEPDED/MINCOMMERCE of October 24, 2012 regulating the manufacture, import and marketing of non-biodegradable plastic packaging in Cameroon.

In order to put the decree mentioned above into effect, the Minister in charge of the environment issued circular N°096/C/CAB/MINEPDED on April 10, 2014, referring to the compliance control and repression of offenders' audits decree. As a result, huge stockpiles of non-compliant plastic packaging are routinely confiscated and stored in the facilities of MINEPDED's central and decentralized services. Cameroon is taking the required measures to comply with the significant worldwide development concerns in its ongoing search for sustainable environmental management. As a result, its waste management reference framework has included action plans by waste type and region as tools for achieving specified goals.

## **0.2. Justification**

After reviewing the different publications on the subject, it became clear that the management of SuPs has received only a minor contribution, while SuPs waste management has taken centre stage. Investigating the management of SuPs reveals activities that damage the environment. The recent focus on the negative consequences of inadequate waste management systems, mainly plastic pollution, calls for additional research. This is necessary because the frequently stated implications affect everyone; even future generations are not immune.

Moreover, the ban on lightweight plastic bags has been ineffectual since its beginning in 2014. The prevalence of these plastics in marketplaces, stores, and households attests to policy failure. The significant amount of impounded plastics each year by the authorities of Yaounde provides evidence of the limitations in enforcing the law. Till date, 979 996.4 kg of illicit plastics have been impounded throughout the country. Therefore, there is a need for research to understand and explain the reasons for this failure.

### **0.2.1 Personal Reason**

I became motivated and interested in this subject due to the distressing sight of rivers filled with plastic bottles in my vicinity. The alarming rate at which these "bottle seas" are increasing to the extent that many areas experience plastic bottle floods during the rainy season,

made it evident that there is a significant issue with waste management, particularly regarding plastic waste.

Further impetus came from preliminary findings due to curiosity, which led to understanding the stakes revolving around the plastic waste sector and plastic pollution. The high production rate of this somewhat inappropriate material, which appears indispensable in our daily activities, highlights an apparent mismatch between plastic production and waste management systems. Therefore, there is a need to use scientific methodology to understand and address this gap in order to make sense of this anomaly.

### **0.2.2. Scientific Reason**

The scientific reason is to investigate the cultural factors that influence the use and management of single-use plastics in Yaounde, Cameroon. This research aims to understand how cultural beliefs, values, and practices shape people's attitudes and behaviours towards single-use plastics, and how these factors interact with broader social, economic, and environmental systems.

The study is grounded in the anthropology of development, which emphasizes the importance of understanding local cultures and contexts in order to develop effective and sustainable development interventions. By examining the cultural dimensions of single-use plastics management in Yaounde, this research seeks to contribute to the development of culturally appropriate and sustainable solutions to the problem of plastic waste.

Furthermore, the study aims to fill a gap in the literature on single-use plastics management in sub-Saharan Africa, where there is a lack of research on the cultural factors that influence plastic waste generation and management. The findings of this research could have important implications for policymakers, development practitioners, and community leaders working to address the problem of plastic waste in Yaounde and other urban centers in the region.

### **0.3 Research Problem**

Plastic pollution has emerged as a critical global issue, with an estimated 8 million tons of plastic waste entering the oceans annually. This influx of plastic debris causes severe environmental and health problems, affecting marine life, ecosystems, and human populations. Wildlife ingest or become entangled in plastic, leading to injury or death, while microplastics enter the food chain, posing potential health risks to humans. Recognizing the gravity of this crisis, the international community has responded with various agreements and initiatives. For instance, the United Nations launched the "Global Partnership on Marine Litter" and the "Clean

Seas" campaign, aiming to mobilize governments, businesses, and individuals towards sustainable practices and significant reductions in plastic waste.

Cameroon, aligning with these global efforts, faces considerable challenges in managing plastic pollution, especially in its bustling capital city, Yaounde. With over 3 million residents, Yaounde produces around 600,000 tons of waste each year, with single-use plastics constituting approximately 10% (Ngwa et al., 2020). Despite the Cameroonian government's enactment of a 2012 law banning lightweight plastics, enforcement has been largely ineffective. The continued prevalence of plastic waste highlights the city's inadequate waste management infrastructure, which struggles to cope with the volume and complexity of plastic disposal (Republic of Cameroon, 2012; Ngwa et al., 2020). This situation underscores the urgent need for more effective, culturally informed strategies to combat plastic pollution in Yaounde.

#### **0.4 Problem Statement**

Plastic waste is a huge problem worldwide, and Yaounde, the capital of Cameroon, is no exception. With more than 3 million people living there, the city produces about 600,000 tons of waste each year, and single-use plastics make up about 10% of this amount (Ngwa et al., 2020). That means around 60,000 tons of plastic waste annually, which is far more than the city's waste management system can handle, leading to widespread environmental pollution. The current waste management systems are inadequate, resulting in improper collection, disposal, and recycling practices that make the problem worse (Ngwa et al., 2020). This issue is particularly severe in densely populated areas and informal settlements, where waste management services are inconsistent and under-resourced (Mbitikon & Fotsing, 2015).

In 2012, the Cameroonian government tried to tackle the growing problem of plastic pollution by passing a law that banned lightweight plastics of less than 60 microns (Republic of Cameroon, 2012). However, even with this law, the enforcement has been weak. Single-use plastics are still widely used in daily life in Yaounde, showing a significant gap between policy intentions and what actually happens (Ngwa et al., 2020). This ongoing use of plastics suggests that just having regulations isn't enough; other factors, especially cultural ones, are at play in shaping how people handle plastic waste.

The cultural context in Yaounde includes a mix of beliefs, values, and practices that affect how people use and dispose of single-use plastics. For instance, plastic bags and other single-use items are often seen as modern and convenient, making them more popular than traditional packaging methods (Ndikontar, 2014). The informal economy, which makes up a big part of the city's commercial activities, relies heavily on plastic packaging because it's cheap

and easy to get. Street vendors and small-scale retailers, who are a significant part of the informal sector, continue to use and distribute plastic bags widely, despite the official ban. This situation highlights the complex relationship between cultural norms and economic practices that influence waste management behaviours.

In Yaounde, cultural practices and community norms play a crucial role in shaping waste management behaviours. The use and disposal of single-use plastics are deeply embedded in everyday life, influenced by perceptions of modernity and convenience. Plastic bags and other single-use items are often seen as symbols of cleanliness and efficiency, preferred over traditional packaging methods. The informal economy, which is a vital part of Yaounde's commercial landscape, relies heavily on affordable and readily available plastic packaging. Street vendors and small-scale retailers, who dominate the informal sector, continue to use plastic bags extensively despite the official ban. This cultural attachment to plastic products underscores the need for waste management strategies that resonate with local values and practices.

Despite the 2012 ban on lightweight plastics and the existence of other waste management regulations in Yaounde to curb plastic pollutions, enforcement has been largely ineffective, and single-use plastics continue to be prevalent. Given the persistent use of single-use plastics and the difficulties in enforcing the ban, it's clear that a purely regulatory approach isn't enough. There is an urgent need to explore the cultural dimensions of single-use plastics management to develop more effective and sustainable solutions. This research aims to investigate how cultural beliefs, values, and practices shape the use and disposal of single-use plastics in Yaounde, and how these insights can inform more effective waste management policies. This exploration aligns with the overarching research question:

## **0.5 Main Research Question**

- What is the relation between culture and single-use plastics management in Yaounde?

### **0.5.1 Specific Research Questions**

- What are the cultural representations of single-use plastics in Yaounde?
- What are the practices related to single-use plastics in Yaounde?
- How have single-use plastics practices evolved in the wake of the COVID-19 pandemic?
- How are single-use plastic wastes managed in Yaounde?
- What is the relationship between policy dynamics and practices?

- What are the alternatives to single-use plastics within the cultural context?

## **0.6. Main Research Hypothesis**

- The relationship between culture and single-use plastics is that, cultural values and norms in Yaounde influence the attitudes and behaviours towards single-use plastics management.

### **0.6.1 Specific Research Hypotheses**

- Single-use plastics in Yaounde may be seen as a symbol of convenience, modernity, and social status, despite growing awareness of their environmental impact.
- The practices related to single-use plastics in Yaounde are deeply rooted in the local culture, which encompasses various aspects such as production, distribution, consumption, disposal, reuse, repurposing, and recycling.
- The COVID-19 pandemic has led to an increase in the use of single-use plastics due to heightened concerns about sanitation and hygiene, coupled with a shift in consumer behaviour towards more take-out and delivery services. However, this trend may vary across in different context based on factors such as pre-existing environmental attitudes, local policies, and socio-economic conditions.
- Single-use plastic waste in Yaounde is managed through a combination of formal and informal methods. These include government-led waste collection, recycling initiatives, and efforts by local environmental associations and NGOs. However, individual practices such as reuse, repurpose, recycling and disposal often result in most waste ending up in uncontrolled dumping sites due to weak enforcement of waste management regulations and limited public awareness of the environmental impacts of plastic waste.
- The policy dynamics in Yaounde significantly influence the practices and behaviours of individuals, and conversely, the practices and behaviours of individuals also shape and alter policy dynamics over time.
- Within the cultural context of Yaounde, the use of traditional materials such as banana leaves, palm fronds, and locally sourced reusable fabrics, as well as the adoption of modern sustainable alternatives like biodegradable plastics and recycled materials, could serve as viable substitutes to single-use plastics. This shift could be influenced by cultural values, socio-economic factors, environmental awareness, and local policies promoting sustainability.

## **0.7 Main Research Objectives**

- To explore and understand the cultural factors influencing single-use plastic consumption and management practices in Yaounde, with the aim of identifying potential avenues for improving waste reduction and promoting sustainable alternatives.

### **0.7.1 Specific Research Objectives**

- To investigate and understand the cultural meanings, perceptions, and practices associated with the use, repurposing, recycling and disposal of single-use plastics among the diverse communities in Yaounde, and how these cultural representations influence their environmental behaviour.
- To explore, understand, and document the cultural practices, attitudes, and perceptions related to the use, repurpose, recycling and disposal of single-use plastics among the urban communities in Yaounde. This research will also aim to identify potential cultural barriers and enablers to reducing single-use plastic consumption and promoting sustainable alternatives in the region.
- To examine and understand the shifts, adaptations, and continuities in human behaviour, attitudes, and socio-cultural patterns related to single-use plastics consumption and disposal during and after the COVID-19 pandemic.
- To explore and understand the cultural practices, societal attitudes, and behavioural patterns influencing the management of single-use plastic wastes in Yaounde, with a focus on identifying potential avenues for community-driven sustainable waste management solutions.
- To understand and analyze the relationship between policy dynamics and practices within the specific cultural or societal context of Yaounde, examining how policies are interpreted, implemented, and influenced by local cultural norms, beliefs, and power structures.
- To explore and understand the culturally-acceptable and sustainable alternatives to single-use plastics within a specific cultural context, and to assess their feasibility, impact on traditional practices, and potential for wide-scale adoption.

## **0.8. Research Methodology**

The vocal assertions of the actors and the researchers' observations of their behaviour are the two primary types of data gathered during fieldwork. However, the nature of social reality and its accessibility to observers remains a fundamental methodological issue for social anthropologists (Holý & Stuchlik, 1983). Stoller (2010) critiques other researchers because

they write senseless ethnographies that are often isolated or disconnected from their society under study. They ought to develop sensory awareness via long-term involvement in the lives of others. Therefore, designing research is primordial.

This study considers the social life of single-use plastics and the life cycle of plastic production, consumption, disposal, retrieval, reuse, repurposing and recycling if they align with environmental policies. An ethnographic approach comprising many different sets of tools and procedures was adopted to construe SuPs management and the associated behaviours. Generally, the researcher's body is an essential research tool (Sassatelli et al., 2009). The representations of SuPs and the corresponding waste vary from one individual to another. Therefore, Drackner (2005) has cleverly maintained that the emphasis is put on a twofold question asking "what is waste? To whom?" These questions determine post-consumer behaviours of SuPs.

### **0.8.1. Design**

The design of this research is ethnographic, combining observation, interviews and documentary research methods. This design, as described by Morgan (1998), facilitates the generalization of qualitative data when exploring a phenomenon in depth and measuring the prevalence of its dimensions. In essence, it refers to the plan or proposal for conducting research, involving the intersection of philosophy, inquiry strategies, and specific methods (Creswell, 2009). According to Creswell (2009), these philosophical assumptions are known by various names, such as worldview, which denotes a fundamental set of beliefs guiding action or the general perception of the world (Guba, 1990, p. 17). Others have referred to them as paradigms (Lincoln & Guba, 2000; Mertens, 1998), epistemologies and ontologies (Crotty, 1998), or broadly conceived research methodologies (Neuman, 2000).

### **0.8.2. Settings**

The setting of a research refers to the specific social, cultural, and physical context in which the research is conducted. It encompasses the geographical location, the community or group of people being studied, their social interactions, cultural practices, beliefs, and values, as well as the broader historical, political, and economic factors that shape their lives. According to Creswell (2013), it involves a detailed description of information about people, places, or events. In this research, the general setting was the seven subdivisions of Yaounde, the capital of Cameroon, located at 3°52' North and 11°31' East. The study aimed to explore SuPs management practices and various settings within Yaounde, which were chosen based on the data type required from interviews and observations. Multiple locations within these



subdivisions were selected as research sites. The table below lists the specific locations where the research took place.

<b>Subdivision</b>	<b>Location</b>	<b>Status</b>	<b>Type of research participant</b>
Yaounde 1	Central town	MINEPDED	Civil servants, state agents in charge of the implementations of plastic law
	Central town	MINEPAT	SuPs users (Civil servants, cleaners)
	Streets around the administrative units,	Public Spaces	SuPs users (hawkers, pedestrians)
	Centre de Sante le Jourdain	Health Centre	Health personnels, patients, Health administrators
	Central Market, Mfoundi market, Etoudi	Market	SuPs users (Merchants, hawkers, plastic bag retailers)
Yaounde 2	Mokolo market	Market	SuPs users (Merchants, hawkers, plastic bag retailers)
	Tsinga, Cité-verte, Carrière	Household	SuPs users
Yaounde 3	The Campus of the University of Yaounde 1	Educational institution	SuPs users
	Efoulan, Ngoa-Ekelle	Household	SuPs users
Yaounde 4	Mvog-mbi Market	Market	SuPs users (Merchants, hawkers, plastic bag retailers)
	Mvan	Namé Recycling-Plastic recycling firm	PET recycling agents
	Mimboman, Ekounou, Odza	Household	SuPs users
Yaounde 5	Nkolmesseng, Essos, Ngousso	Household	SuPs users
Yaounde 6	Biyem-assi	- CIPRÉ (NGO), - ECOCLEAN (Environmental Association) - J2D Afrique (Environmental Association)	Experts in plastic recycling and pollution
	Etoug-Ebe, Biyem-assi, Mendong, Mvog-betsi	Household	SuPs users
	Mvog-betsi, Acacia, Melen	Market	SuPs vendors
Yaounde 7	Oyomabang, Nkolbisson, Etetak	Household	SuPs users

**Table 1 : Research settings**

Source: Mbanam Valentine, 2023

### **0.8.2.1 Households and Streets**

This research investigated SuPs management in various settings within the seven Subdivisions of Yaounde. Recognising spaces with the widespread use of plastic packaging, the study focused on households, markets, shops, public administration offices, and streets as critical locations for SuP use, reuse, and disposal. Within households, SuPs entered through purchased goods and were observed being utilized for various purposes before being discarded. This research documented post-consumer behaviours such as reuse, repurposing, and discarding across these settings. Additionally, streets emerged as active hubs showcasing diverse SuP practices. Street vendors, who relied heavily on plastic bags and bottles for packaging, played a significant role in influencing the behaviours of other actors and contributing to post-consumer practices like street littering. By analyzing these diverse settings, this research aimed to gain a comprehensive understanding of SuP management within the complex social and economic landscape of Yaounde.

### **0.8.2.2 Markets and Other Business Premises**

To examine SuP management practices within the urban landscape of Yaounde, we meticulously selected spaces in the seven subdivisions based on their prominent commercial hubs. Utilizing our arsenal of recording devices—camera, notebooks, and audio recorders—we gathered empirical evidence at various streets, markets, including Etoudi, Central Market I, Mokolo, Melen, Mvog-mbi, Essos, and Total Ngousso markets, along with Acacia and Mvog-Betsi markets. Our observations focused on SuP usage patterns among traders, while interviews provided insights into plastic bag sourcing and clientele demographics. Notably, we engaged cookery oil vendors who purchase and repurpose plastic containers acquired through waste collection efforts.

### **0.8.2.3 Public Administrations**

During the fieldwork, several public administrative offices were visited as focal points for investigation. Notably, the Brigade responsible for enforcing regulations on illicit plastic bags within the MINEPDED situated in the "Intendance Junction," a district in the capital city. Through photographic documentation and interviews with the Brigade's Chief, insights were gained into their enforcement strategies, including surprise inspections at retail outlets to seize contraband plastic bags illicitly imported into the country. Official statistics on impounded illicit plastic bags, post-legislation enactment, and a roster of affiliated associations engaged in circular economy initiatives, plastic manufacturing entities, and corporations were explored.

BUCREP, under the authority of MINEPAT provided information highlighting the significant number of young people in the population of Yaounde. Although specific statistics on the latest youth population in Yaounde are not available, the information from 2005 emphasizes that nearly 64% of the population in Cameroon comprised young people under 25 years old, with approximately 51% being women (BUCREP, 2005 ). This demographic group holds substantial influence over consumption patterns within the population.

Given their sizable representation, it is evident that the youth play a crucial role in determining the rate of consumption, including plastic usage, in Yaounde and beyond. Their awareness of the detrimental effects of single-use plastics on the environment is particularly important in mitigating environmental pollution. Efforts to engage and educate the youth population on responsible plastic usage and recycling practices are essential for fostering sustainable waste management practices and addressing the pervasive issue of plastic pollution in urban areas like Yaounde.

#### **0.8.2.4 Health Centre**

Investigating the intricacies of SuPs management in healthcare settings within the framework of the COVID-19 pandemic offers invaluable perspectives into the intersection of public health, environmental sustainability, and cultural practices, and ethnographic methods such as direct observation and interviews provided a deeper understanding of how attitudes towards waste, hygiene, and convenience influence the management of single-use plastics in the health centre. At the same time, the increased demand for PPE and the emphasis on infection control has led to a surge in plastic waste generation, making it essential to understand how these changes have impacted waste management practices and environmental consciousness within the health centre for developing sustainable solutions.

#### **0.8.2.5 Waste Dughill**

Nkolfooulou, situated on the outskirts of Yaounde, hosts the landfill for Yaounde City within the Mefou and Afamba Division of the Centre Region. At the same time, HYSACAM, the waste management company, is headquartered in Mvog-Ada, where its administrative offices are located (Eloundou, 2006; Eloundou, 2010). Securing research authorization was imperative for conducting investigations in Nkolfooulou, where documentation included photographs of various garbage vans and trucks transporting waste from neighbouring areas to be deposited in the landfill after undergoing weighing procedures. Interviews were conducted with HYSACAM employees to gain insights into their roles and activities, and the gas

collection centre was observed to purify toxic gases such as CO<sub>2</sub> and Methane, producing clean gas that is subsequently released into the atmosphere.

#### **0.8.2.6 Waste Management and Recycling Firms in the Private Sector**

Post-consumption practices, particularly those associated with circular economies, informed the selection of research sites. J2D-Afrique and CIPRÉ, both legally recognized organizations dedicated to waste management, share facilities in Carrefour "Caca" Biyem-Assi, with CIPRÉ having a subsidiary in the Simbock neighbourhoods. Similarly, ECO-CLEAN, operating in the Nsimeyong neighbourhood, falls within Yaounde 6 subdivision, focusing on waste collection, transportation, segregation, trade, and disposal within local communities. Observations and photography documented these activities, and interviews were conducted with association leaders and their staff members in their respective offices and during their operations across diverse residential spaces, commercial establishments, and markets.

Additionally, a single-use plastic manufacturing company, SOFAMAC, and a firm specializing in granulate production, serving as raw materials for manufacturing enterprises, were incorporated into the study. SOFAMAC operates in the Soa, Mefou, and Afamba Division, Center Region, whereas Namé Recycling resides in the Mvan neighbourhood of Yaounde 4 subdivision. Waste management practices were scrutinized through visual documentation and interviews to understand waste transformation processes, leakages in the plastic lifecycle, and their underlying causality.

#### **0.8.3 Target Population**

Following Lior's approach (2012), which is a finite set of individuals constituting the target population for study, the present research focused on residents of Yaounde known to use or possess extensive knowledge regarding SuPs management practices, primarily those prohibited and alternatives, aiming to generalize findings. The target demographic comprises adults aged 21 years and older actively participating in SuPs management, including government officials, community leaders, business owners, plastics consumers, waste management workers, traders, representatives of environmental associations and non-governmental organizations (NGOs) based in the seven subdivisions.

#### **0.8.4 Sample**

A population typically has too many members for practical research; therefore, an examination is sometimes limited to one or more samples taken from it. A well-chosen sample will reveal the details of a given population parameter. However, the relationship between the

sample and the population must be such that accurate population inferences may be drawn (Creswell, 2009). The sample is drawn from all the males and females above the age of 21 living in the seven subdivisions that make up the Mfoundi division who have used single-use plastics. The study population also included all workers and members of Environmental Associations, waste pickers, traders, household's members and NGOs selected through the sampling techniques. Some officials from the public administration who are responsible for environmental protection were also enrolled in the research.

### **0.8.5 Sampling**

According to Lior (2012), sampling can be understood as the process of constructing a sample, which is a group of elements selected from a larger group, from the perspective that studying the smaller group will reveal important information about the larger group or population. The elements that make up the sample are the basic units of a population: individuals who have used disposable plastics and alternatives to SuPs in households, on the streets, in markets, and shops, workers in private and public administrations who use SuPs or are concerned with environmental protection and members of environmental associations and NGOs.

#### **0.8.5.1 Types of Sampling**

An initial inquiry established the use of a non-probability sampling technique. You can readily gather data using non-probability sampling, which involves non-random selection based on convenience or other criteria (Russell, 2011). Also known as convenience sampling, non-probability sampling can be understood when acknowledging what Russell (2011) referred to as "a glorified term for grabbing whoever will stand still long enough to answer your questions" (pg 147).

For availability sake, it was necessary to have some degree of convenience when enrolling participants in this research. This sampling method was preferred because it is convenient, inexpensive, takes less time than other sampling techniques, and is straightforward. Another reason is that getting respondents with post-consumer behaviours like dumping or littering plastic bags and bottles on the streets could not be predetermined. They are spontaneous actions that occur during fieldwork. Identifying respondents in households, offices, and markets gave some time for interviews and necessitated this sampling strategy.

### **0.8.5.1.1 Sampling Techniques**

Several sample techniques can be used when recruiting participants for qualitative research. Because they work well with almost all qualitative research designs, purposeful and snowball sampling are the two sampling techniques used in this research. Sampling approaches can be employed relatively with other techniques within a qualitative dissertation. Here, we shall further detail the two most widely used techniques.

#### **0.8.5.1.1.1 Purposeful Sampling**

Purposeful sampling, sometimes called purposive and selected sampling, is a sampling approach that qualitative researchers employ to choose individuals who can offer in-depth and thorough information about the topic under study (Creswell, 2009). It is very arbitrary, with the qualitative researcher determining the requirements each participant must satisfy to be considered for the research. To examine how the inhabitants of Yaounde use single-use plastics, five selection criteria were derived:

- Traders in single-use plastics
- Persons who has used single-use plastics
- Persons involved in post-consumer practices
- Public officials concerned with implementing plastic policies
- Leaders and members of Environmental Association or NGO and plastic manufacturing firms involved in SuP waste management.

Purposeful sampling was also used in the research process because targeted interviews were conducted to obtain the precise information and in-depth knowledge concerning SuPs management practices after being guided randomly and conveniently to enrol research participants for interviews. Knowledge of plastic recycling could only be obtained from plastic manufacturing firms and Environmental Associations concerned with the circular economy. For example, information on the contraband was obtained from plastic bag merchants.

#### **0.8.5.1.1.2 Snowball Sampling**

This research used the snowball sampling technique as a methodological choice to find relevant stakeholders. It is a non-probability sampling technique called "snowball sampling or network sampling" that enlists current research participants to assist in recruiting potential study participants (Creswell, 2009). In this research, the snowball sampling technique was used based on the information obtained from different stakeholders of single-use plastic management.

Traders in the illicit plastic bags on the streets, markets, and shops permitted the recruitment of other stakeholders, such as their suppliers, wholesalers, retailers, and clients. Wholesalers and retailers have led researchers to manufacturers of illicit polybags and contraband agents in neighbouring countries. Their clients were interviewed on the streets, in households, in shops, and other traders in markets and hawkers. Single-use or disposable plastics are known to be discarded shortly after use. When interviewed on post-consumer practices, respondents who practised dumping or street littering visited these sites. Present on the sites, waste scavengers were observed picking plastic bottles and other objects.

Snowball sampling also permitted the tracing of actors who picked waste plastic bottles from waste bins and landfills. After we had interviewed these scavengers, based on their information, the information we gathered from them made us proceed to meet their clients, either those who reuse plastic bottles to package cooking oil in the markets or "Namé Recycling," a company that produces granules from these waste plastic bottles. Later, we were led to meet the workers of SOFAMAC, a factory manufacturing plastic bags, buckets, and pipes, to cite these examples. They were interviewed as well.

#### **0.8.5.2 Sampling Procedures**

In academic research, a sampling procedure involves selecting a subset of individuals from a larger population to participate in the study, with the aim of ensuring that those chosen are representative of the overall group (Creswell, 2013). The sampling process for this study involved defining the population, establishing a sample frame, outlining a sampling technique, determining the sample size, and implementing the sampling strategy.

##### **0.8.5.2.1 Identify the Population.**

In terms of population, it comprises all the units to which study results can be applied. In other words, a population is a collection of all the units that share the variable feature under investigation and for whom research results may be generalized (Ader & Mellenbergh, 1999). The inhabitants of the seven subdivisions of the Mfoundi Division represent the population of this research.

##### **0.8.5.2.2 Specify a Sampling Frame**

The sample frame is a list of individuals in the population to whom the results will be generalized. It is also a list of the things that comprise the population from which samples will be drawn. Individuals in households who have previously used single-use plastics in every subdivision, pedestrians, vendors who use single-use plastics for packaging in markets and

shops and hawkers on the streets, environmental associations and NGOs, plastic recycling companies, and government officials in charge of environmental protection and plastic policy implementation.

#### **0.8.5.2.3 Specify a Sampling Method**

The research objectives specified the sampling method. It was the combination of describing, exploring, highlighting, and explaining behaviour related to single-use plastics among the inhabitants of Yaounde. Sampling had to consider research participants who could give detailed accounts to enhance understanding of SuPs management and explain behaviours. The Purposeful sampling technique, which is selective and judgmental, permitted us to choose research participants and enrol them in the research based on the information needed. For example, only officials versed with the plastic policies were enrolled in public administration. In households, persons who opted for single-use plastics as a preferable packaging option among others and had once used single-use plastics were enrolled.

Similarly, the snowball technique was used during this research to enrol research participants. Respondents who could inform us about the sources of banned plastics were unknown and rare to identify, making data collection complicated. Once a hawker of the banned plastics was enrolled, they gave information concerning the source of the plastic bags. We proceeded to meet and enrol the seller, too. After the interview, we recorded information concerning the source, which they were produced and channeled into the country. Such participants could only be recruited through this technique.

#### **0.8.5.2.4 Determine the Sample Size**

We held the common principle related to determining the size of a sample population in qualitative research, which states that a sample size should be sufficiently large and varied to elucidate the research aims (Kuzel, 1999; Marshall, 1996; Patton, 2015). Adding to the fact that the goal of qualitative research is the attainment of saturation (Hanneman et al., 2013; Russell, 2011; Tracy, 2013), the sample size of this research was determined by the attainment of the saturation point. During interviews, when we noticed that the same theme kept emerging, we concluded that we had attained a saturation point. This was felt when we realized that no further themes emerged during interviews and observations.

In this study, a common technique employed to identify themes was to analyze word repetition in the narratives provided by respondents. Word repetition was considered a significant indicator of the salience of particular concepts in the minds of research participants.



For instance, nearly all French-speaking respondents frequently used the French term "emballage plastique" (plastic packaging). The word "emballage" refers to the primary function of plastics as a packaging material. One of the themes that emerged from this analysis was packaging. When multiple respondents repeatedly used the same word, we determined that we had reached a saturation point regarding how different types of single-use plastics, such as plastic bags, were referred to.

#### **0.8.5.2.5 Implement the Plan**

Through purposeful sampling, individuals knowledgeable about SuPs were targeted for inclusion in the study. Visits to households facilitated interviews with occupants regarding their preferences and usage patterns of SuPs. Waste scavengers at dumping sites were also interviewed to understand their perceptions of SuPs, reasons for collecting them, and their intended purposes, which primarily involved selling the plastics to palm oil and cooking oil traders in markets. Subsequently, using snowball sampling, interviews were conducted with the traders above, who highlighted the significance of SuPs bottles in packaging their products and using lightweight plastic bags to retail cooking oil in small quantities. Referrals from these traders led to interviews with households purchasing oil from them, allowing for observations on the disposal of plastic bottles after use.

Further insights were gained through interactions with recycling firms, as informed by waste scavengers, where workers shared their perspectives on waste plastics and their subsequent utilization. This approach extended to interviewing potential clients identified by these firms. The sample size was not predetermined but focused on capturing diverse data across the seven subdivisions. Enrollment and continuation of qualitative data collection were guided by pursuing new information and interest in specific contexts. For instance, interviews ceased upon data redundancy, signaling completion within a particular setting.

#### **0.8.5.3 Sample Size**

The sample size was determined during interviews, and respondents were recruited until the saturation point was reached when no new themes emerged. "When additional data do not yield additional insights, you have reached the saturation point" (Leavy, 2017, pg. 78). Qualitative research that makes use of grounded theory for analysis with any method often uses "saturation" to determine when to stop data collection (Robson, 2011; Roller & Lavrakas, 2015).

Creswell and Creswell (2018) had this to say concerning the sample size in qualitative research. In terms of the number of participants in the qualitative study, the researcher identifies and recruits a small number that will provide in-depth information about the central phenomenon or concept being explored in the study. For this research, quota sampling, a type of non-probability sampling, was determined based on the desired information requested. In-depth interviews were conducted with key informants recruited according to pre-set quotas, as shown in the table below;

<b>Actor</b>	<b>Place</b>	<b>Number</b>
Waste workers	HYSACAM, Nkolfoulou	3
NGO actor	CIPRÉ, Biyem-Assi	2
NGO actor	J2D-Afrique, Biyem-Assi	2
Environmental Association	ECO-CLEAN, Nsimeyong	2
Plastic manufacturing Company	SOFAMAC, Soa	3
Plastic recycling firm	Namé Recycling	2
Households	The seven subdivisions of Yaounde	44
Streets	Public spaces	10
Markets	Mokolo, Central Market, Melen market	6
Offices	MINEPDED, MINEPAT	3
Schools	University of Yaounde 1 Campus,	3
	<b>Total</b>	<b>80</b>

**Table 2 : Sample size**

**Source:** Mbanam Valentine, 2023

### **0.8.6 Research Methods**

A research method serves as a comprehensive kit that researchers employ to execute empirical investigations and elucidate the causes and manifestations of societal phenomena via distinct data acquisition techniques, analyses, and interpretations (Stockemer, 2019; Bernard, 1988). Embodied within a research methodology, this toolkit is driven by the study's objectives, dictating the appropriate approach. This research toolkit can be categorized into two main groups: primary and secondary research methods. Primary research methods include firsthand data-gathering approaches; direct observation and interviews. In contrast, secondary research methods rely on existing sources, such as government reports, scholarly articles, and databases. Both categories offer unique advantages and limitations, necessitating careful consideration before application.

### **0.8.6.1 Primary Research Methods**

Primary research is the method whereby a researcher directly collects data and does not depend on previously collected data. The researcher claims ownership of the data. Interviews and observations are the different primary research methods in this research. Interviews during fieldwork produced voice recordings that were later transcribed into text. Observations were noted in the block note as field notes, and they prompted snapshots representing iconography. This type of research is mainly carried out during fieldwork, considering different settings where the research was conducted, as mentioned above (Bernard, 2006; Yin, 2011).

#### **0.8.6.1.1 Qualitative Research Methods**

The word "method" has several meanings specified at several levels, with epistemology understood at the most general level, which means "how we know things" (Russell, 2006). Data is essential in research because it gives insight into a particular phenomenon, behaviour, or population, to name these examples. It is, therefore, necessary to determine the methods used to collect data. Data collection is accurately obtaining, collecting, observing, and measuring information.

Understanding the relation between culture and the management of SuPs necessitates the perception, representations, and knowledge of different users and their practices. The aim of this study is to investigate the perceptions, management practices, and prevalence of trading and packaging of illicit single-use plastic bags, as evidenced by their widespread presence on the streets and rivers of Yaounde. To achieve this, primary research methods, such as observation and interviews, were employed to collect firsthand data. In contrast, secondary research methods, such as document review, were utilized. These methods were chosen to comprehensively understand the attitudes and behaviours surrounding single-use plastic management in Yaounde. Fieldwork activities including interviews and observations generated self-reports that offered valuable insights into how participants conceptualized and approached SuPs management. Combining primary and secondary research methods allowed for providing for a foundation to build on for the latter and to fill the research gap for the former.

##### **0.8.6.1.1.1 Observations**

Observation is a research method that involves the systematic and careful observation and recording of people's behaviour, social interactions, and physical surroundings (Yin, 2011). In this study, observation was used to collect data on the use and management of single-use plastics (SuPs) in Yaounde, Cameroon. Observation is essential to collect data relating to

people's gestures, social interactions, actions, scenes, and the physical environment and entails what, when and where to observe to obtain significant data (Yin, 2011). Observations were made in various contexts and circumstances to interact and get a rich picture of the research participants as they used SuPs. Direct observation, a technique used in observation research, was employed in this study.

#### **0.8.6.1.1.1.1 Research Technique**

Direct observation is a technique used in observation research, where the researcher observes and records behaviour as it occurs in real-time (Russell, 2011). Direct observation is an important technique in observation research because it allows the researcher to collect detailed and accurate data about people's behaviour and social interactions in their natural environment (Russell, 2011). In this study, direct observation was used to collect data on the use and management of single-use plastics in Yaounde, Cameroon. The researcher observed and recorded people's behaviour related to single-use plastics in various settings, such as markets, streets, and homes. Direct observation provided valuable insights into how people use and manage single-use plastics in their daily lives, and how cultural factors influence their behaviour.

#### **0.8.6.1.1.1.1.1 Direct Observation**

Direct observation was employed in this study to observe people and record their behaviour on the spot. Direct observation provides much more accurate results about behaviour than reports of behaviour. Observations were conducted in various settings such as households, public offices, markets, shops, dumping sites, plastic manufacturing and recycling facilities, environmental associations, and NGOs. These locations were identified as pertinent sites for observing SuPs-related behaviours. In households, plastic bags were used to package different things, and plastic bottles were also observed serving different purposes.

Post-consumer practices were also observed. Some plastics, like lightweight plastics, were most often used only once and immediately thrown away after the first use. Thick plastic bags and bottles were used more than once in homes for storing other commodities. Some plastic bottles were repurposed and used for vertical agriculture or flower planting. Observations done in public administrations revealed the use of plastic bottles to package mineral water. Markets were observed because they are the sources of SuPs for households. SuPs were observed to be the packaging options most commonly used by merchants in the markets. Similar packaging practices were observed in shops and markets, where merchants exhibited comparable behaviours in their packaging approaches.

### **0.8.6.1.1.2 Interviews**

Interviews were necessary to build data in this research. To uncover the reality of the practices surrounding single-use plastics, it was essential to ask questions and understand the reasons behind the choices made by various actors involved in single-use plastics. This research considered qualitative research techniques, and the data collection techniques associated with each data collection method are discussed below.

#### **0.8.6.1.1.2.1 Research Techniques**

Interviews were used as a research method in this study, with three main techniques employed: semi-structured interviews, unstructured interviews, and in-depth interviews. Semi-structured interviews were used to engage various stakeholders in discussions on environmental pollution and plastic management practices, while unstructured interviews allowed respondents to share their experiences and insights in their own words. In-depth interviews were used to obtain comprehensive and detailed insights into complex phenomena such as SuPs management. These techniques were essential for probing the underlying meanings, representations, attitudes, and behaviours of diverse stakeholders involved in SuPs management, and for informing evidence-based interventions to address plastic pollution.

##### **0.8.6.1.1.2.1.1 Semi-structured Interviews**

A semi-structured interview is suitable when the researcher already has some grasp concerning what is happening (Crinson & Leontowitsch, 2006). They were primarily used in formal Semi-structured interviews play a pivotal role in engaging various stakeholders, including business owners, plastic users, and traders, in discussions surrounding environmental pollution in Yaounde. These interviews are highly effective for collecting qualitative, open-ended data from participants involved in plastic manufacturing companies, recycling firms, environmental associations, NGOs, public administrators, and wholesalers of banned plastics.

For business owners and plastic users, semi-structured interviews provide a platform to express the reasons behind their attitudes, opinions, and values regarding SuPs and their impact on the environment. By eliciting their perspectives, we gained insights into stakeholders' roles in the plastic management chain and their contributions to environmental preservation through sustainable SuPs management practices. Additionally, these interviews facilitate discussions on plastic policies and potential substitutes for banned plastics, informing policy development and decision-making processes.

Furthermore, semi-structured interviews with public administrators are essential for assessing the efficacy of plastic policy implementation and understanding their interpretations of the current situation. By interrogating administrators according to structured topic guides, researchers we delved into issues such as the spread of banned plastics and plastic debris in business environments, providing valuable insights into policy enforcement challenges and areas for improvement.

Moreover, semi-structured interviews are instrumental in exploring the source and distribution chain of banned plastics in Yaounde. By interviewing wholesalers responsible for bringing these plastics into the country, we verified information provided by public authorities and establish the origins of banned plastics. This investigative approach contributed to a comprehensive understanding of the dynamics surrounding plastic policy enforcement and illicit plastic trade.

In summary, semi-structured interviews served as a valuable tool for engaging stakeholders in discussions on environmental pollution and plastic management practices. By providing a flexible yet structured framework for data collection, these interviews enabled us to explore a wide range of topics and gather rich insights from diverse perspectives, ultimately informing efforts to address plastic pollution and promote sustainable SuPs management in Yaounde.

#### **0.8.6.1.1.2.1.2 Unstructured Interviews**

Unstructured or narrative interviews provide a suitable platform for respondents to share their stories in their own words, offering invaluable insights into the life cycle of SuPs and the experiences of various stakeholders (Crinson & Leontowitsch, 2006; Gideon, 2012; Lee, 2000). Informal plastic waste pickers, as actors in the SuPs cycle, play a vital role in giving discarded plastics a second life. Through unstructured interviews, these individuals vividly described their experiences with plastics, shedding light on the realities of plastic waste scavenging and informal plastic waste management.

Similarly, unstructured interviews allowed for open-ended questioning, enabling environmental associations, NGOs, and traders of illicit plastics to share their insights and experiences naturally (Crinson & Leontowitsch, 2006; Gideon, 2012; Lee, 2000). These actors are instrumental in promoting plastic recycling initiatives and addressing the challenges associated with plastic pollution. By allowing respondents to recount their individual experiences and perspectives, unstructured interviews facilitate a deeper understanding of the

complexities surrounding plastic recycling efforts and the diverse approaches taken by different stakeholders.

Moreover, unstructured interviews with respondents in households provide a platform for exploring the diverse uses of SuPs and the reasons behind consumer preferences (Crinson & Leontowitsch, 2006; Gideon, 2012; Lee, 2000). By recounting their experiences with various packaging materials and post-consumer practices, respondents offer valuable insights into the causal effects of plastic pollution and the potential for alternative packaging solutions.

In summary, unstructured interviews play a crucial role in capturing the narratives and experiences of informal plastic waste pickers, actors in informal plastic waste management, traders of SuPs plastics and illicit plastics, environmental associations, NGOs, and households. By allowing respondents to share their stories authentically, unstructured interviews provide valuable insights into the challenges, practices, and perspectives surrounding SuPs management and recycling efforts.

#### **0.8.6.1.1.2.1.3 In-depth Interviews**

In-depth interviews, unlike semi-structured or unstructured approaches, provide a critical avenue for obtaining comprehensive and detailed insights into complex phenomena such as SuPs management (Crinson & Leontowitsch, 2006; Hanneman et al., 2013). These interviews are indispensable for probing the underlying meanings, representations, attitudes, and behaviours of diverse stakeholders involved in SuPs management, including government officials, community leaders, and representatives of environmental associations, plastic users, and NGOs.

Government officials play a pivotal role in shaping policies, enforcing regulations, and making decisions related to SuPs management and plastic ban compliance. In-depth interviews with government officials offer invaluable insights into the challenges they face in implementing policies, the effectiveness of existing regulations, and areas for improvement in governmental strategies and interventions.

Community leaders serve as essential intermediaries between the government and local communities, influencing community responses to environmental issues like plastic pollution. In-depth interviews with community leaders provide nuanced insights into cultural norms, community values, and local initiatives addressing SuPs management within specific cultural contexts. These interviews inform the development of community-driven solutions and foster greater engagement and participation in SuPs management efforts.

Representatives of environmental associations and NGOs are at the forefront of advocacy efforts, community engagement strategies, and collaborative approaches to promoting sustainable practices and influencing policy development. In-depth interviews with these stakeholders offer valuable insights into advocacy strategies, community mobilization efforts, and the effectiveness of grassroots initiatives in addressing plastic pollution.

Moreover, in-depth interviews with plastic users provide essential perspectives on the preferences, beliefs, and behaviours surrounding SuPs usage and disposal. These interviews uncover the underlying meanings and perceptions of SuPs, shedding light on post-consumer practices and informing strategies for behaviour change and sustainable consumption.

In summary, in-depth interviews are indispensable for gaining a comprehensive understanding of SuPs management practices, cultural dynamics, and policy landscapes. By engaging with diverse stakeholders and delving deep into their experiences and perceptions, we were informed on evidence-based interventions that contribute to more effective and sustainable solutions to plastic pollution.

#### **0.8.6.2 Secondary Research Methods**

Document analysis through a literature review was employed to explore existing data and identify unexplored areas in waste management. Familiar secondary research sources included textbooks, libraries, encyclopedias, research articles, all used in this research, and other publications, including legal texts governing the waste management sector, sourced from the MINEPDED and the Internet.

The vital contribution of secondary research in this study was the development of the literature review, which facilitated the identification of research gaps in SuPs management. Textbooks, soft and hard copies, and the University of Yaounde 1 library were consulted, along with the Library for Thesis and Dissertation of the Faculty of Arts, Letters, and Social Sciences. Online resources, including websites and documents downloaded from websites, were also used to review the existing literature. Document analysis aided in determining the scope of the study on SuPs management, including contributions from other scholars on packaging as a whole and the use of single-use plastics.

Reviewing these contributions and consulting documents related to SuPs use allowed for a comprehensive understanding of the existing literature on the topic, highlighting gaps in knowledge and introducing the concept of policy in other countries and its failure in the Cameroonian context. Document analysis, including policy documents, reports, and



publications, was also necessary to monitor the progress of Cameroon's implementation of regulations on plastic bans and to track the progress of other countries. This technique allowed for continuously updating information related to SuPs waste management and provided insights into the practical application of policies and regulations.

### **0.8.6.3 Data Collection Tools**

Qualitative research turns the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos (Della & Keating, 2008). Achieving these requires the use of specific research tools to collect data. In this research, the toolkit comprised different interview guides for different techniques used for the different stakeholders to be interviewed and a direct observation guide. These tools worked with the interview and the observation techniques, respectively.

The interview guide was used on different target groups. Government officials concerned with the implementation of plastic policies, the various stakeholders involved in activities contributing to giving plastics a second life, like environmental associations and NGOs, plastic bag commercial agents, research participants in households and public places. When the COVID-19 Pandemic broke out, another interview guide was explicitly used during that specific context.

Each interview guide aimed to delineate different representations and opinions on ways of managing single-use plastics and how various actors discard them. A direct observation guide was used in different settings. The settings were determined by the activities related to SuPs and the knowledge surrounding these behaviours. The themes observed were what type of packaging option they preferred and how they used them. In markets, different traders chose different packaging options. The lightweight plastic bags were preferred especially by retailers. Sub-themes included observing how they discard them.

Other tools associated with the above cited were a camera, a sound recorder, notebooks, pens, and a document reviewing schedule. Data were collected simultaneously using a camera in specific settings like households. The camera was used to collect visual data to illustrate SuP management practices. An audio recorder was used to interview research participants and key informants during the fieldwork. Bloc notes and pens were used to write down information that could be forgotten. They were also used when the informant refused to be recorded for discretion. Key points and pertinent facts were noted quickly instead of a recorder that may take some time to turn on.

#### **0.8.6.4 Data Collection Procedures**

According to Creswell (2009), the data collection steps include defining the boundaries for the study, collecting information through different research techniques that may involve unstructured or semi-structured observations and interviews, documents, and visual materials, as well as establishing the protocol for recording information. The data collection procedures consist of several interconnected steps: sampling, gaining permissions and recruiting participants, identifying data sources, recording the data, and administering the data collection procedures (Creswell & Creswell, 2018, n.p).

Before conducting the study, the first phase was dedicated to identifying critical elements for this research because the different techniques would occur concomitantly. The various settings where the research was to take place were identified. The choice of setting was guided by the presence of participants, from whom tangible information could be obtained based on the research questions. These places included plastic manufacturing companies, waste dumping grounds, households in the seven subdivisions, and the premises of some public and private establishments, to name these examples. Research participants were also identified, principally those knowledgeable about SuPs management. The target population, types of samples, and sample size were also determined. Purposeful Sampling was suitable because it was convenient enough to enrol research participants. After all, much time was needed to answer the questions, and thus, enrolling participants who were available to respond was necessary.

Further, the need to obtain permission became necessary. A "Research Authorization" was obtained from the Department of Anthropology to comply with regulations. Then, different types of data required were also determined, and the research questions guided this—open-ended questions for ethnographic research strategy. Interview guides were prepared for each targeted respondent (households, waste management associations, HYSACAM, SuPs traders, and SuPs manufacturers). The interviews were conducted to determine representations of SuPs and the corresponding actions, knowledge of waste management practices, opinions on the effects of plastic waste management, and the ban on light plastic bags. Observation guides were also prepared that stated the objects, sites, persons, and actions to observe.

A correspondence to get research permission was addressed to the administrative units, the heads of plastic manufacturing companies, NGOs, and the HYSACAM. This demand specified the researcher's profile, the research topic, the purpose of the study, and the length of time to be present on the site. This note was handed to the various administrations many days

before going to the field. We received favourable responses from most of the correspondences. We also requested authorization to use the research tools at our disposal, but in SOFAMAC, we were forbidden to use cameras. Access to the Brigade in charge of repression and control of waste management in line with environmental protection in the MINEPDED was also granted. Impounded illicit plastic bags were seen and photos taken.

At the onset of fieldwork, specific research settings were predetermined, while others surfaced during the investigation, spurred by snowball sampling, where waste scavengers divulged details about their operations. To further expand our knowledge base, we were guided to their clientele to explore the reasons behind their plastic purchases and subsequent usage. Before participation, informants provided consent voluntarily, a prerequisite for inclusion in the study. Questions were posed in a language comprehensible to the respondents, occasionally necessitating clarification of terms and concepts for enhanced clarity. Participants were allowed to decline to answer questions and discontinue participation at any point during the interaction.

The interviews were conducted by the lead investigator alone. After being informed of the questions, a master's student helped administer the surveys for the seven Subdivisions. HYSACAM activities take place both diurnally and nocturnally. Observations were done during these periods to complete knowledge of their functioning related to time and space. During the day, persons who could not make it to the makeshift garbage dumping sites can be seen waiting for the garbage trucks to discard their waste.

The kick-off of the study was in November 2017 and continued to early 2024. The fieldwork was done in sequences because of accessibility to specific settings where certain key informants were enrolled, and observation was done. For example, a correspondence for a research authorization was deposited in the headquarters of HYSACAM in March 2018; permission was only granted in June of the following year. The outbreak of COVID-19 in late 2019 caused the Government to declare confinement where movements were minimal. Access to specific sites, especially the leading brewery production company (Les Brasseries du Cameroun), one of the highest consumers of plastic bottles used in packaging beverages like fruit jus and mineral water, was denied because of the respect of the Anti-covid 19 protocol.

#### **0.8.6.5 Data Management**

Data originated from diverse sources, including audio recordings from interviews, transcribed texts, images, and field notes. Notebooks and pens supported note-taking during fieldwork, with written records serving as backup measures when recording devices were prohibited. Research participants permitted us to use voice recorders before interviews, which

took place on streets, in homes, in offices, and in marketplaces. Confidentiality was maintained by avoiding the revelation of identities. Photographs were captured using cameras accessible exclusively to researchers upon request. Permission was sought before taking photos in specific settings, such as SOFAMAC, where photography was strictly prohibited.

Images were securely stored on external drives and later encrypted to adhere to confidentiality commitments. Data were safeguarded and retained during the research process, with exclusive access granted to researchers. Simultaneously, data were consulted during the active phase of the research for exploration during the data processing period. Most data consisted of voice recordings, which ensured complete information retention, contrasting with handwritten notes, which might omit critical details due to rapid writing demands. Audio files were manually transcribed, allowing repeated playback in slow motion to facilitate understanding and concurrent note-taking. Transcripts in French were initially prepared, followed by translation into English to enhance comparative analysis during theme identification. Identified themes included post-consumer habits, emerging from comparing responses to identical queries. Sub-themes like "plastic discard" were derived from analyzing similar responses or shared viewpoints. Thematic coding, exemplified by "SuPs" (Single-Use et al.), simplified data management and expedited the writing process as locating quotations became more straightforward.

#### **0.8.6.6 Data Analysis and Interpretation**

Prior to disseminating information derived from fieldwork and archive sources, ethnographers critically filter the data using their conceptions, beliefs, and deductions, thereby shaping presentations that align with contemporary sociocultural, social, and political contexts (Vargas-Silva, 2013). Qualitative content analyses have been employed to examine interview transcripts, where Roller and Lavrakas (2015) describe this technique as systematically reducing content while paying close attention to its original context to uncover themes and derive meaningful interpretations from the data (Roller & Lavrakas, 2015)

In this research, interviews were manually transcribed before undergoing content analysis, which involved identifying units of analysis—such as narratives, sentences, phrases, or themes—through iterative coding and analysis processes until reaching interpretations. Units of analysis included terms associated with waste, behavioural patterns about SuPs, and preferences for packaging materials. Photos were also analyzed, focusing on settings, perspectives, people, objects, or activities, with keywords serving as codes to reveal underlying meanings (Leavy, 2017).

After collecting and analyzing data, interpretation became essential to understand the causes behind observed phenomena and the prevalence of certain behaviours. Creswell and Creswell (2018) suggested various methods for interpreting qualitative results, including drawing upon personal experiences, reflexivity, or personal views to make judgments about findings (Creswell & Creswell, 2018).

Geertz's (1973) theory of thick description highlights the importance of revealing hidden layers of meaning within complex social discourses (Geertz, 1973). Theoretical frameworks, such as those proposed by Geertz, assist in interpreting qualitative data by providing a lens to recognize concepts relating to single-use plastics management in context from diverse perspectives. By employing alternative theories, researchers can shift focus from specific issues to broader societal concerns, enhancing the usefulness, rigour, and credibility of research findings (Lee, 2000; Porta & Keating, 2008). This qualitative research adheres to an interpretive paradigm, recognizing concepts concerning single-use plastics management from multiple subject viewpoints, guided by a theoretical framework (Leavy, 2017).

## **0.9 Ethical Consideration**

Ethical considerations are necessary to give credit to the study and protect the research participants from harm. Therefore, we used our expertise whenever essential to ensure that this study obeys the principles of rights and wrongs (ethics) at conception, during the research, and beyond, ensuring that all participants' rights and welfare are protected.

We obtained individual consent, not collective, before starting an in-depth interviews and observation. They were assured and reassured of their rights and protection. They were allowed to ask questions before and during the interview to ensure their free will participation was not violated. Research subjects were not coerced in the course of getting enrolled in this study. French was the primary language of communication since most subjects expressed themselves in the French language. Generally, the research subjects were allowed to choose the language they could best express themselves from the two official languages.

Regarding confidentiality, only the principal researcher had access to the names of everyone who completed the surveys and those who participated in the interviews. Pseudonyms were used in place of their real names in the list of oral sources. We shall keep all information, such as names, confidential from any third party. Only the researcher and the supervisor have access to where the data was saved.

## **0.10 Work Plan**

The thesis starts with an introductory section that offers a comprehensive overview of the research topic's significance, research questions, thesis structure, and the methodology employed to investigate the cultural, social, and economic aspects of managing single-use plastics in Yaounde. Subsequently, the thesis delves into an ethnographic exploration of Yaounde, providing a detailed portrayal of the city's cultural, social, and economic milieu. This segment immerses readers in the city's culture, inhabitants, and daily routines, setting the groundwork for subsequent chapters. The literature review, theoretical framework, and conceptual definitions chapter critically assess existing literature on the pre-plastic era, single-use plastics uses, waste management, and cultural perspectives. It establishes the theoretical underpinnings of the study and elucidates key concepts crucial for comprehending the cultural and social dimensions of single-use plastics management in Yaounde.

Chapter three on representations of single-use plastics scrutinizes the cultural and symbolic connotations associated with these materials in Yaounde, investigating how different social groups perceive and portray them. The thesis proceeds to analyze consumption patterns of SuPs in various urban clusters within Yaounde in the fourth chapter, identifying and evaluating factors influencing their usage in these clusters. Chapter five scrutinizes the impact of the COVID-19 pandemic on the consumption, disposal, and handling of single-use plastics in Yaounde, considering how public health concerns have shaped the dynamics surrounding these materials. Chapter six on cultural perspectives regarding single-use plastic waste management delves into diverse actors' attitudes, beliefs, and practices, exploring cultural and social influences on waste management behaviours.

Furthermore, in the seventh chapter, the thesis assesses the effectiveness of existing behavioural patterns in accordance with policies and regulations concerning single-use plastics in Yaounde. It evaluates the levels of compliance among communities and businesses with these regulations, as well as the factors influencing compliance. It also investigates local initiatives, innovations, and cultural adaptations to reduce reliance on single-use plastics by exploring alternative materials, practices, and cultural adjustments for sustainable waste management in chapter eight. Finally, the conclusion synthesizes vital findings and contributions of the thesis while discussing implications for policy-making, practical applications, and future research directions within the realm of single-use plastics management in Yaounde.

**CHAPTER ONE:  
ETHNOGRAPHY OF YAOUNDE**

Chapter one introduces the ethnography of Yaounde by providing a deep exploration of the city's diverse cultural, social, and economic dynamics. It involves describing the geolocation in space and time, observing social structures, religious practices, and economic activities, and gaining insights into the everyday lives of the city's inhabitants. This approach allows a nuanced understanding of identity, belonging, and social organization within Yaounde's dynamic urban environment.

### **1.1. Geography**

The geographic context of Yaounde is pivotal to understanding the complexities of single-use plastics management within the city. Situated in the central region of Cameroon, Yaounde's unique topography, climate, and urbanization patterns profoundly influence both cultural practices and environmental challenges. The city's hilly terrain and tropical climate impact waste accumulation and disposal methods, while rapid urban growth has led to significant spatial and demographic changes. These geographic factors interact with cultural traditions and modern consumption habits, creating distinct patterns of plastic waste generation and management. This section explores the physical and human geography of Yaounde, examining how these elements shape and are shaped by the cultural practices surrounding single-use plastics.

The geography of Yaounde, plays a significant role in shaping the context of single-use plastics management. Yaounde, the capital city of Cameroon, is characterized by its diverse topography, including hills, valleys, and rivers, which influence waste management practices and environmental considerations (Mbala-Kyé, 2015; Parrot et al., 2009). The city's geographical location in central Cameroon positions it as a hub for economic activities and cultural exchanges, impacting the consumption and disposal of single-use plastics within the urban landscape (Mbala-Kyé, 2015). The thesis delves into how the geographical features of



Yaounde interact with cultural norms and practices to shape the management of single-use plastics, highlighting the importance of understanding the local geography in sustainable waste management strategies.

Yaounde, Cameroon's capital city, boasts a unique geographic location (Owona, 2017, p.23). Nestled in the central western region of the country, it sits on a plateau at an elevation of approximately 750 meters (2,460 ft) above sea level (Gazetteer Web, n.d.). The city's geographic coordinates are 3°52'N 11°31'E (3.8667° N, 11.5167° E) (OpenStreetMap, n.d.). This positioning grants Yaounde a pleasant climate with mild temperatures year-round, thanks in part to its distance from the coast and the influence of the nearby Adamaoua Massif mountains (Owona, 2017, p.24).

### **1.1.1 Physical Geography**

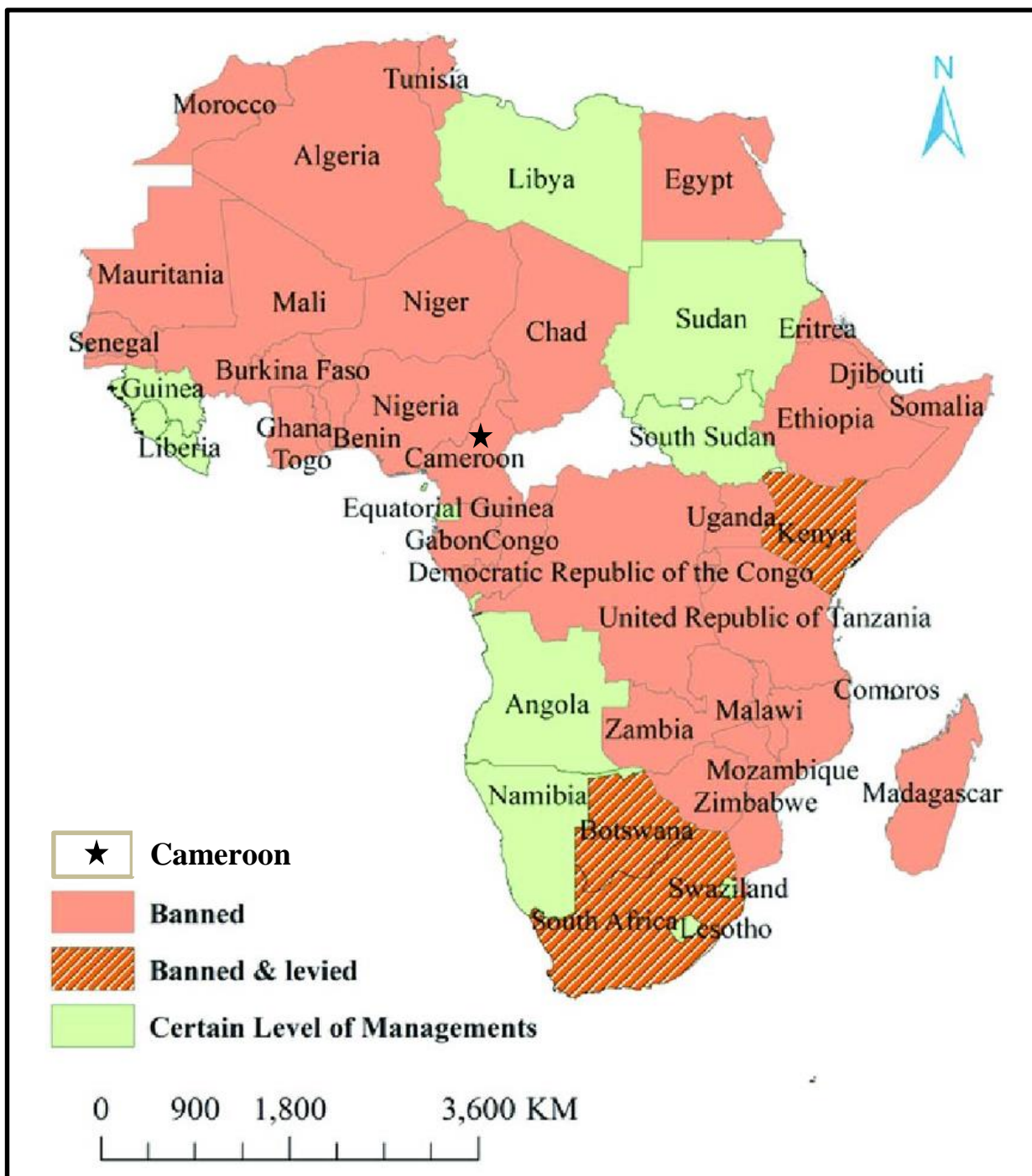
The physical geography of Yaounde significantly influences its waste management practices, particularly in relation to single-use plastics. Yaounde is located in the central region of Cameroon, characterized by a hilly terrain and an elevation of about 750 meters above sea level (Neba, 1999). This topography affects the flow of waste, with plastic debris often accumulating in low-lying areas and waterways, exacerbating pollution and drainage issues.

The city's tropical climate, marked by distinct wet and dry seasons, further complicates waste management efforts. Heavy rainfall during the wet season leads to increased runoff, which can transport plastic waste across the city and into surrounding environments (Ndue, 2014). Additionally, Yaounde's rich natural resources, including its forests and water bodies, are under constant threat from plastic pollution, which impacts both the ecological balance and the livelihoods of those dependent on these resources (Tata, 2006).

### **1.1.2 Population Distribution and Demographics**

The population distribution and demographics of Yaounde play a critical role in shaping the management of single-use plastics in the city. As the capital and second-largest city of Cameroon, Yaounde hosts a diverse and rapidly growing population, estimated at over 3 million residents (World Population Review, 2024). The population density varies significantly across different neighborhoods, with higher concentrations in central urban areas and lower densities in the suburban and peri-urban regions. This uneven distribution affects waste generation and management practices, as densely populated areas tend to produce more waste, including single-use plastics, and face greater challenges in waste collection and disposal (Mbitikon & Fotsing, 2015).

The demographic profile of Yaounde is marked by a youthful population, with a significant proportion under the age of 30, driven by high birth rates and migration from rural areas seeking better economic opportunities (UN Habitat, 2010). This youthful demographic is often more inclined towards modern consumer habits, contributing to higher consumption of single-use plastics. Additionally, socioeconomic disparities across different demographic groups influence waste management behaviours and access to waste management services. Wealthier neighbourhoods might have better waste disposal infrastructure and services compared to poorer, informal settlements where improper disposal of plastics is more prevalent (Achankeng, 2003).

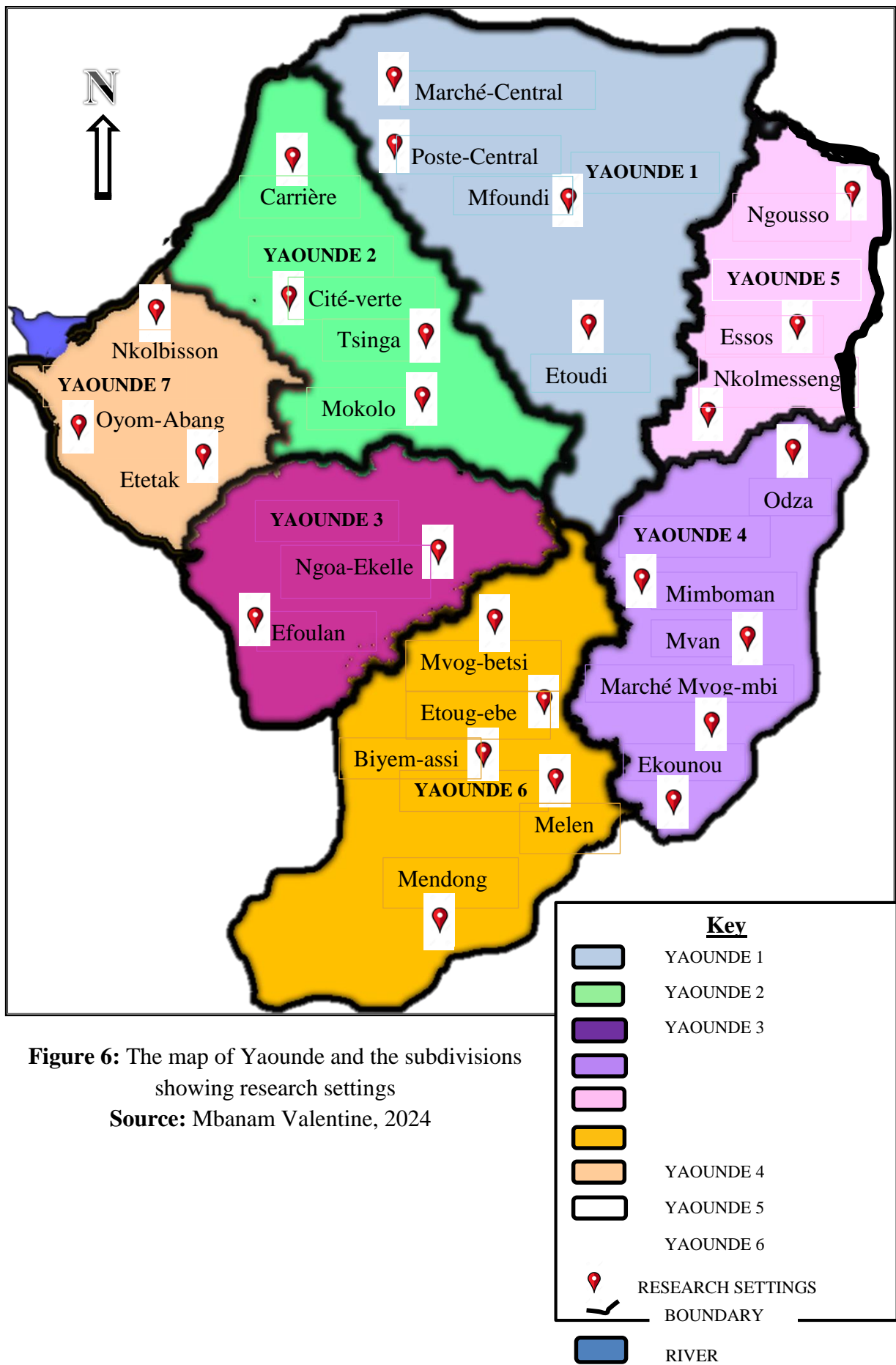


**Figure 4:** The location of Cameroon amidst other African countries with Legislative measures towards Single-use Plastics management

Source : Asha Embrandiri, 2021



**Figure 5:** The Map of the Republic of Cameroon, showing Yaounde.  
**Source:** Mbanam Valentine, 2024



**Figure 6:** The map of Yaounde and the subdivisions showing research settings

**Source:** Mbanam Valentine, 2024

### **1.1.3 Transportation Networks and Plastic Waste Distribution**

Transportation networks in Yaounde significantly influence the distribution and management of plastic waste across the city. The city's infrastructure includes major roads, informal transit systems, and burgeoning public transportation options, which together form the backbone of urban mobility. These networks facilitate the movement of goods and people, but they also play a critical role in the spread and accumulation of plastic waste. Major thoroughfares and market areas, which are hubs of economic activity, often experience higher concentrations of plastic waste due to the increased foot traffic and commercial exchanges that involve plastic packaging (Ngouanet & Nkwatoh, 2018).

The informal transportation sector, comprising motorcycles (benskins) and shared taxis, is particularly prevalent in Yaounde. This sector, while essential for everyday commuting, contributes to the scattered disposal of plastic waste, as vendors and passengers often discard plastic items along transit routes (Ndikontar, 2014). Additionally, the lack of adequate waste receptacles along these routes exacerbates the problem, leading to littering and the formation of unofficial dumpsites, especially in less regulated peri-urban areas.

Moreover, the efficiency and reach of waste collection services are closely tied to the city's transportation networks. Poor road conditions and traffic congestion can hinder waste collection efforts, leading to irregular and incomplete waste removal, particularly in densely populated or remote neighborhoods (Tata & Fonjong, 2015). This inefficiency results in the uneven distribution of plastic waste, with some areas experiencing higher levels of pollution due to inconsistent collection services.

### **1.1.4 Impact of Geography on Policy and Regulation**

The geographical features of Yaounde have a significant impact on the formulation and implementation of policies and regulations concerning single-use plastics. The city's hilly terrain and tropical climate present unique challenges for waste management, requiring policies that are tailored to these specific environmental conditions (Neba, 1999). For instance, heavy rainfall during the wet season can cause plastic waste to be carried into waterways and drainage systems, leading to blockages and flooding. Consequently, effective regulations must address

these seasonal variations and include provisions for enhanced waste collection and disposal during peak rainfall periods.

Furthermore, the spatial distribution of Yaounde's population influences the efficacy of policy enforcement. Dense urban centers with high population concentrations tend to generate more plastic waste, necessitating stricter regulatory measures and more robust waste management infrastructure (Mbitikon & Fotsing, 2015). In contrast, peri-urban and rural areas, which are less densely populated, often suffer from inadequate waste management services, making it challenging to enforce policies uniformly across the city. This disparity necessitates geographically differentiated approaches to policy implementation, ensuring that both urban and peri-urban areas receive appropriate attention and resources.

The informal sector, prevalent in many parts of Yaounde, also impacts policy effectiveness. Informal markets and vendors contribute significantly to plastic waste but are often overlooked in formal regulatory frameworks. Policies must therefore incorporate strategies to engage the informal sector, promoting responsible waste disposal practices and integrating informal waste collectors into the formal waste management system (Ndikontar, 2014).

Moreover, the city's infrastructure, including transportation networks and waste disposal facilities, must be considered in policy design. Poor road conditions and traffic congestion can hinder waste collection efforts, highlighting the need for regulations that support infrastructural improvements and the efficient operation of waste management services (Tata & Fonjong, 2015).

## **1.2. Historical Context**

The historical context of Yaounde's approach to single-use plastics management is deeply rooted in the city's colonial and post-colonial development trajectory. Established as a German military outpost in 1888, Yaounde evolved under successive German, French, and British colonial administrations, each influencing its urban planning and waste management practices. The post-independence era, particularly from the 1960s onwards, marked a period of rapid urbanization and industrialization, accompanied by a surge in the consumption of modern conveniences, including single-use plastics. The adoption of plastics was initially seen as a symbol of progress and modernity, reflecting global trends and the influence of Western consumer culture (Nkwi & Socpa, 2013).

However, inadequate infrastructure and regulatory frameworks lagged behind this rapid adoption, leading to mounting environmental challenges. The persistence of traditional cultural practices, such as market trading and communal waste disposal methods, further complicated the integration of modern waste management systems. Understanding this historical backdrop is essential for comprehensively addressing the cultural dimensions of single-use plastics management in Yaounde and contributing effectively to the anthropology of development

### **1.2.1 Pre-colonial Era**

In the pre-colonial era, the region now known as Yaounde was primarily inhabited by the Beti-Pahuin ethnic groups, including the Ewondo, Eton, and Fang peoples (Ndongmo, 2008). These communities had well-established socio-cultural systems and sustainable environmental practices that reflected a deep connection to their natural surroundings. Waste generation was minimal, and materials used in daily life were primarily organic and biodegradable, such as leaves, wood, and animal products (Nkwi, 1987). The concept of single-use items was virtually nonexistent; instead, goods were crafted for durability and reusability, in line with the communal and resource-conserving ethos of these societies (Warnier, 1993).

The Beti people, who were the earliest inhabitants of the Yaounde region, had a traditional waste management system that involved composting organic waste and using it as fertilizer for their crops (Ndongmo, 2008). They also had a strong cultural belief in the sanctity of the environment and the need to preserve it for future generations. This belief was reflected in their traditional practices, such as the prohibition of hunting certain animals and the preservation of sacred forests (Ndongmo, 2008). Similarly, the Bamileke people had a traditional waste management system that involved the use of biodegradable materials for packaging and disposal (Ndongmo, 2008). They also had a strong cultural belief in the interconnectedness of all living things and the need to live in harmony with nature. This belief was reflected in their traditional practices, such as the use of natural resources in a sustainable manner and the preservation of sacred sites (Ndongmo, 2008).

However, the arrival of colonial powers disrupted these traditional waste management practices and ways of life. Colonial powers introduced new waste management systems that were often at odds with traditional practices, leading to conflicts and tensions between the colonial authorities and the indigenous populations (Ndongmo, 2008).

### **1.2.2 Colonial Era**



During the colonial era, Yaounde underwent significant transformations under German, French, and British rule, which had profound impacts on the city's cultural and environmental landscape. The German colonial administration established Yaounde as a military outpost in 1888 and introduced new urban planning and infrastructural developments that began to alter traditional lifestyles (Ndangam, 2008). The subsequent French administration expanded these efforts, promoting Western consumption patterns and material culture. This period saw the introduction of non-biodegradable materials, including early forms of single-use plastics, into everyday life. European goods were imported in large quantities, and the colonial focus on modernization and urbanization often overlooked the sustainability practices of the indigenous populations (Fanso, 1989).

The colonial authorities introduced new waste management practices that were often at odds with traditional systems. For instance, the French colonial administration introduced a system of waste collection and disposal that was centralized and managed by the state, replacing the traditional waste management practices of the different ethnic groups, which were decentralized and community-based (Njoh, 2007). The introduction of new waste management practices also led to changes in packaging systems. Before colonial intervention, packaging materials were primarily made from natural materials such as leaves, bark, and animal skins (Njoh, 2007). However, with the arrival of colonial powers, new packaging materials such as glass, metal, and paper were introduced. Plastics were not widely used during the colonial era, but their use began to increase in the mid-20th century (Njoh, 2007).

Colonial powers also introduced new forms of consumption that contributed to the generation of waste. The arrival of colonial powers led to the establishment of markets and trading posts, which brought new goods and products to Yaounde (Njoh, 2007). These goods were often packaged in non-biodegradable materials, which contributed to the accumulation of waste in the city. The interactions between colonial powers and traditional waste management systems were complex and often marked by conflict and resistance. Indigenous populations resisted the imposition of new waste management practices and continued to practice their traditional systems (Njoh, 2007). However, over time, traditional waste management systems were eroded, and new practices were adopted.

The colonial era had a profound impact on the cultural practices and waste management systems of the different ethnic groups in Yaounde. The introduction of new waste management practices, packaging systems, and forms of consumption led to changes in behaviours and contributed to the accumulation of waste in the city. The interactions between colonial powers

and traditional waste management systems shaped the current waste management landscape in Yaounde and continue to influence contemporary waste management efforts.

### **1.2.3 Post-colonial Era**

In the post-colonial era, Yaounde experienced rapid urbanization and economic growth, significantly influencing cultural practices and environmental management. After gaining independence in 1960, Cameroon embarked on a path of modernization, characterized by increased industrialization, urban expansion, and the adoption of global consumer culture (Konings & Nyamnjoh, 2003). The influx of plastic products, including single-use plastics, became a hallmark of this modernization process. These items were initially celebrated for their convenience and affordability, reflecting a broader global trend towards disposable consumer goods. However, the rapid adoption of plastics outpaced the development of effective waste management infrastructure, leading to growing environmental challenges (Ngnikam & Tanawa, 2000).

The transition from traditional to modern waste management practices was further complicated by the persistence of informal and communal systems. Despite efforts to establish formal waste collection and disposal mechanisms, many residents continued to rely on traditional methods, such as open burning or informal dumping, which were ill-suited to managing non-biodegradable waste (Ndang, 2011). Additionally, public awareness and education regarding the environmental impacts of plastic waste were limited, exacerbating the problem.

The government faced significant challenges in managing waste due to a lack of resources, infrastructure, and technical expertise (Mbengue, 2019). In response to these challenges, international organizations and NGOs began to play a more active role in waste management in Yaounde. For example, the United Nations Development Programme (UNDP) and the World Bank provided technical assistance and funding for waste management projects in the city (Mbengue, 2019). Additionally, local NGOs such as the Cameroon Association for the Protection of the Environment (CAPE) and the Association for the Promotion of Environmental Education (APEE) worked to raise awareness about waste management issues and promote sustainable waste management practices (Mbengue, 2019).

However, the impact of globalization on waste management practices in Yaounde has been complex. On the one hand, globalization has brought new technologies and innovations to waste management, such as waste-to-energy systems and recycling programs (Mbengue, 2019). On the other hand, globalization has also led to an increase in the importation of single-

use plastics and other non-biodegradable waste, which has exacerbated waste management challenges in the city (Mbengue, 2019). Understanding the post-colonial era's influence on current waste management practices in Yaounde highlights the need for culturally informed and context-specific solutions to the single-use plastics crisis.

#### **1.2.4. Historical Perspective on Single-use Plastics**

The historical evolution of single-use plastics in Yaounde mirrors global trends, marked by significant shifts from pre-colonial sustainability to modern environmental challenges. Before colonial influence, the indigenous communities of Yaounde relied on biodegradable materials, maintaining a sustainable balance with their environment (Nkwi, 1987). The introduction of single-use plastics began in the colonial era, with European powers importing plastic goods that symbolized modernity and convenience. These early plastics were initially limited to elite and administrative circles, reflecting the colonial agenda of showcasing Western lifestyles (Ndangam, 2008).

Post-independence, Yaounde saw a dramatic increase in the consumption of single-use plastics, driven by rapid urbanization, economic development, and globalization. The 1960s and 1970s marked a period of economic optimism, during which plastic products became widely accessible and were integrated into everyday life. Plastics offered an affordable solution for packaging and disposable items, aligning with the growing consumer culture (Konings & Nyamnjoh, 2003). However, this shift occurred without the simultaneous development of adequate waste management systems, leading to significant environmental issues.

In the late 20th and early 21st centuries, the adverse impacts of single-use plastics became increasingly evident. Piles of plastic waste began to accumulate in urban areas, clogging drainage systems and contributing to pollution. Efforts to manage this burgeoning crisis included government policies aimed at regulating plastic use and promoting recycling, though these measures often struggled against entrenched consumption habits and inadequate infrastructure (Ngnikam & Tanawa, 2000).

### **1.3 Cultural Mosaic of Yaounde**

Understanding the cultural mosaic of Yaounde is important for understanding waste management strategies that are inclusive, effective, and sustainable. The city's diverse ethnic groups, languages, and traditions have unique waste management practices and attitudes towards single-use plastics, which must be considered when trying to understand if the designed waste management policies are culturally sensitive. Embracing the cultural mosaic of Yaounde

can foster mutual ethnic acceptance, promote social cohesion, and contribute to the overall well-being of its residents.

Different cultural practices and social structures can be seen within communities in Yaounde. The Beti, which includes the Ewondo subgroup, make up the main local ethnic group in the Centre Region of Cameroon, where Yaounde is located. They have lived in the region for many generations, maintaining their distinct traditions, language, and social structure. This encompasses unique family connections, ceremonial customs, and traditional practices that are essential to their cultural heritage (Voundi et al., 2018).

Moreover, the urban areas of Yaounde have a varied population consisting of various ethnicities from different parts of Cameroon, all adding their own traditions to the overall societal makeup. Furthermore, Yaounde is home to immigrant communities from countries such as Nigeria, Chad, Mali, Senegal, and the Central African Republic, among others. These communities have developed their own social networks and support systems, contributing to the city's cultural diversity and forming diaspora communities (Kouega, 2007).

Cameroon's capital city is known for its diverse cultural landscape, with more than 250 unique ethnic groups living together and speaking a total of 24 African languages, in addition to English, French, and Arabic (eDiplomat, 2024). The city is made up of about 250 indigenous groups, each with their own distinct languages and traditions (Kouega, 2007). The different communities in Yaounde showcase a range of cultures, social organizations, and belief systems, showing the city's cultural diversity (Monga, 2000).

Among the notable communities in Yaounde is the Grasslands region, renowned for its rich cultural heritage, including a reconstructed royal chamber and captivating sacred, musical, and artistic traditions (Voundi et al., 2018). The interplay of Anglophone and Francophone regions in Yaounde, marked by the prevalent usage of English and French languages and the presence of distinct legal systems, enriches the national culture through the establishment of public institutions, educational establishments, a multiparty political system, and a shared colonial history (Kouega, 2007). The Mbororo community is recognized for its traditional attire and cultural practices, influenced by colonialism (Kouega, 2007).

Recognizing the cultural dynamics of Yaounde is essential for developing waste management strategies that are inclusive, effective, and sustainable, resonating with the local population and aligning with their cultural values and practices (Parrot et al., 2009). Embracing the city's cultural diversity can foster mutual ethnic acceptance and contribute to the overall well-being of its residents.

### **1.3.1 Indigenous Community**

The indigenous peoples of the city of Yaounde, the capital of Cameroon, primarily belong to the Beti ethnic groups. The term "Beti" refers to a collection of Bantu peoples, including the Ewondo, the Eton, the Bulu, and several other sub-groups (Essono, 1987; Mveng, 1984). The Ewondo, in particular, are widely recognized as the original inhabitants of the Yaounde region. Their presence in this area dates back several centuries, long before the arrival of European colonizers. The Ewondo speak the Ewondo language, which is part of the Bantu language family (Mveng, 1984).

The origins of the Beti and Ewondo are generally located in the forests of southern Cameroon, where they developed a rich and complex culture based on agriculture, hunting, and fishing. They have also maintained traditional social and religious practices that continue to play an important role in community life today (Essono, 1987; Mveng, 1984).

The modern history of Yaounde was influenced by German colonization at the end of the 19th century. In 1889, German colonists established a military post in Yaounde, gradually transforming the city into an administrative and commercial center. The city continued to develop under French colonization after World War I, when Cameroon became a League of Nations mandate under French administration.

The city's development as a cultural and political hub has been shaped by the interactions between different communities, contributing to its unique identity (Asonganyi, 2007). The city grew rapidly in the early 20th century under German colonial rule, and it became the administrative center of the German colony of Kamerun (Njoh, 2007). After World War I, Yaounde was ceded to France and became the capital of French Cameroon. The city continued to grow and develop under French rule, and it became the capital of independent Cameroon in 1960 (Njoh, 2007).

After Cameroon gained independence in 1960, Yaounde became the capital of the new nation, and the Ewondo people continued to play a significant role in the city's political, economic, and cultural life. Today, the Ewondo people are one of the largest ethnic groups in Cameroon, and their cultural heritage is an important part of the city's identity and history.

### **1.3.2 Heterogenous Community**

Yaounde, the capital city of Cameroon, is described by Kivutha (2018) as a diverse community with a varied population consisting of various ethnic groups, cultures, and nationalities. In recent years, the city has seen a notable movement of people from rural areas

to urban areas, resulting in a growth in population and cultural variety (Ngwa et al., 2020). This variety is shown in how different communities use plastic products in different ways.

Njiforti et al. (2018) discovered in their research on plastic usage in Yaounde that the diverse population of the city has resulted in various methods of managing plastic waste. Some communities repurpose plastic bags for storage or garbage, while others dispose of them by burning or burying them. The research also discovered that cultural norms and customs impact how plastic products are used and discarded. Some societies use plastic containers in traditional events, while others see plastic as a representation of advancement and development.

Additionally, Njiforti et al. (2018) emphasize the significance of recognizing the cultural and social aspects that impact plastic usage and waste disposal methods in Yaounde. This knowledge can shape the creation of waste management strategies that are culturally sensitive and inclusive, taking into account the needs and practices of the city's various communities.

### **1.3.3 Immigrant Community**

The Yaounde immigrant community is varied and has expanded greatly over time because of the city's cosmopolitan environment. Yaounde is home to migrants from a range of African nations such as Nigeria, Chad, Central African Republic, and Mali as stated by the International Organization for Migration. These migrants arrive in Yaounde for different purposes, including looking for job opportunities, education, or escaping conflicts in their home nations. The city's cultural diversity has been enriched by the immigrant population, who have brought their own special traditions, languages, and cuisines with them. While some immigrants have assimilated into the community in Yaounde, others encounter obstacles such as prejudice and hostility. In spite of these obstacles, the immigrant population still plays a crucial part in Yaounde's economic and cultural environment (IOM, 2021).

## **1.4 Identity Formation and Expression**

Yaounde is a cultural melting pot with a diverse array of ethnic groups, languages, and customs, which significantly impact how individuals and communities construct and convey their identities. Yaounde's population comprises multiple ethnic groups, from all ten Regions of the country. This ethnic diversity is reflected in the city's linguistic landscape, where French, English, and numerous indigenous languages are spoken. The interplay of these languages and cultures plays a crucial role in identity formation, as individuals often navigate between their ethnic heritage and the broader national identity promoted by the state (Nkwi, 2006). The ability

to speak multiple languages and understand different cultural practices is seen as a marker of sophistication and adaptability in Yaounde.

Cultural practices such as traditional ceremonies, music, dance, and cuisine are vital in expressing and preserving identity in Yaounde. For instance, traditional festivals and rituals provide a platform for individuals to connect with their heritage and reinforce community bonds (Mbembe, 2001). These events often feature traditional attire, music, and dance, which are potent symbols of ethnic identity and pride. However, these cultural practices also have implications for single-use plastics management. For example, traditional ceremonies often involve the use of disposable plastic plates, cups, and utensils, which contribute to plastic waste in the city.

Moreover, social structures such as family and kinship networks are central to identity formation in Yaounde. These networks provide support and a sense of belonging, which are crucial for individual identity. The extended family system, in particular, plays a significant role in socialization and the transmission of cultural values (Nsamenang, 1992). Within these networks, individuals learn about their history, customs, and expectations, which shape their sense of self and community. However, these social structures also influence attitudes towards single-use plastics management. For example, the extended family system may encourage communal eating, which can lead to the use of larger quantities of disposable plastic plates and utensils.

The rapid urbanization and modernization of Yaounde have introduced new dimensions to identity formation and single-use plastics management. The influx of people from different regions and the increasing exposure to global cultures through media and technology have created a dynamic and fluid cultural environment (Fokwang, 2009). Younger generations, in particular, often find themselves balancing traditional cultural values with modern lifestyles and global influences. This cultural shift may also influence behaviours related to single-use plastics management. For example, younger generations may be more likely to adopt sustainable alternatives to single-use plastics due to their exposure to global environmental movements.

The rise of social media and digital communication has also transformed identity expression and single-use plastics management in Yaounde. Platforms like Facebook, Instagram, and WhatsApp allow individuals to curate and share their identities in new and creative ways. This digital presence can sometimes lead to a blending of traditional and contemporary cultural elements, resulting in hybrid identities that reflect both local and global

influences (Nyamnjoh, 2011). However, social media also provides a platform for individuals to raise awareness about single-use plastics and promote sustainable alternatives.

#### **1.4.1 Cultural Diversity and Hybridity**

The cultural diversity and hybridity in Yaounde, Cameroon, are significant aspects that have been the focus of academic inquiry. The city of Yaounde, as well as Cameroon as a whole, is characterized by a high degree of cultural diversity, with influences from various ethnic groups and colonial heritages. This diversity has implications for intercultural dynamics, language use, and the management of sociopolitical crises, such as the Anglophone crisis (Edimo, 2021). The concept of cultural hybridity has been employed to understand the interplay between different cultural influences and how these dynamics shape social, political, and media landscapes. In Yaounde's context, managing cultural diversity and hybridity is a complex and ongoing process with implications for social cohesion, governance, and media representation.

Yaounde is a vibrant city that boasts a variety of cultures, resulting in a diverse and intricate blend of traditions. It is a diverse mix of individuals from varying ethnicities who unite to exchange their distinct traditions, languages, and behaviours. As you stroll through the streets of Yaounde, you can sense the vibrant energy of this diverse combination, as each area presents a unique cultural atmosphere. Anthropologists emphasize the significance of acknowledging Yaounde's hybrid nature as a key factor in shaping the city's identity, which makes it an intriguing location to explore and uncover (UNESCO, 2014).

#### **1.4.2 Ethnic Associations and Social Networks**

Based on Yenshu's (2003) insights into the development of identity in the Sawa and Kedjom communities of Cameroon, it is evident that Yaounde, as a melting pot, undergoes a similar transformation as these communities and many others are found in Yaounde. Yenshu's work sheds light on the parallels between the identity development in these specific communities and the broader dynamics at play in Yaounde. In both contexts, ethnic associations play a pivotal role in shaping and negotiating identities. These associations provide spaces for communal bonding, cultural preservation, and collective action, serving as dynamic hubs where individuals affirm their identities while collectively contributing to preserving and advancing their cultural heritage.





**Photo 1:** “La Communauté Balengou de Yaoundé” translated The BALENGOU Community Hall in Yaounde, situated in Nkomkana, Yaounde 2  
**Source:** Mbanam Valentine, 23<sup>rd</sup> February 2024

The Balengou community, an ethnic group from West Cameroon, has maintained its traditional social structures and community organization in Yaounde, the capital city (Fokwang, 2009). Kinship networks are a key feature of Balengou community organization, with extended family units known as "fondoms" headed by a chief and assisted by a council of elders (Fokwang, 2009). Balengou communities in Yaounde are often organized around specific neighborhoods or quarters known as "quartiers Balengou," characterized by a strong sense of community and mutual support (Fokwang, 2009). Traditional religious practices, centered around ancestor veneration and the use of traditional medicines, are also important to the Balengou community in Yaounde (Fokwang, 2009). The community places a strong emphasis on education and economic development, with many members achieving high levels of education and establishing economic cooperatives and associations (Fokwang, 2009).

### **1.4.3 Negotiating Multiple Identities**

In his work titled "Levels of Historical Awareness: The Development of Identity and Ethnicity in Cameroon," Yenshu (2003) highlights the reconstruction of history under the British colonial indirect rule framework as a fundamental factor in the formation of ethnicity. This historical reconstruction has profoundly impacted the development of ethnic identities in Cameroon.

In Yaounde, people navigate the complexities of identity with ease, often identifying with multiple layers of who they are. For instance, a person may feel a deep connection to their ethnic roots, while also taking pride in their neighbourhood, the work they do, and their national identity. This multifaceted nature of identity is a hallmark of urban life, where people are constantly exposed to diverse perspectives and experiences. In Cameroon, the management of ethnic diversity is an ever-evolving process, with inter-community relations and the politics of identity continually shifting. By examining these intricacies, we gain a richer understanding of

the human experience in Yaounde and the unique challenges and opportunities that come with living in a multicultural society.

#### **1.4.4 Embracing Cultural Pluralism**

One recurring theme revolves around the city's evolving approach towards cultural pluralism. Studies suggest a shift from assimilationist policies (Nyamnjoh, 2011) towards recognising and celebrating ethnic differences (Ambe, 2019). This is evident in initiatives like cultural festivals showcasing diverse traditions and the growing visibility of ethnic associations (Ghogomu, 2012). However, tensions persist, highlighting the need for ongoing efforts to dismantle deeply ingrained ethnocentric biases (Achille, 2014).

#### **1.4.5 Negotiating Space and Belonging**

Yaounde's spatial organisation reflects the complex interplay of ethnic identities. Ethnic associations often cluster in specific neighbourhoods, creating enclaves that provide a sense of community and belonging (Ghogomu, 2012). However, such spatial segregation can reinforce social boundaries and hinder inter-ethnic interaction (Ambe, 2019). Initiatives promoting mixed-use spaces and intercultural dialogue are crucial to fostering a more inclusive urban fabric (Njiforti, 2022).

#### **1.4.6 Urbanisation and Identity Shifts**

In Yaounde, the capital of Cameroon, urbanisation is reshaping traditional identities, as explored by authors like Ambe (2019) and Geschiere (2009). This process shows how urban environments act as catalysts for identity shifts, where traditional identity markers interact with modern influences, creating a captivating cultural evolution (Geschiere, 2009). Language, dress, and rituals are adapting within the urban sphere, incorporating new elements and meanings (Ambe, 2019; Nyamnjoh, 2017; Achille, 2014; DeLancey, 2012).

This interplay between tradition and modernity is sometimes smooth, leading to friction and social tensions as individuals navigate conflicting values and expectations (Ambe, 2019; Nyamnjoh, 2017; Achille, 2014). However, new identities emerge amidst these challenges, drawing from traditional roots and modern elements, creating a uniquely Yaounde cultural expression (Geschiere, 2009). Anthropological studies of Yaounde highlight the fluidity and dynamism of identity formation, emphasising the agency individuals have in negotiating their identities within the urban landscape (Geschiere, 2009; Ambe, 2019). Understanding these ongoing shifts is crucial for fostering mutual understanding and social cohesion as Yaounde's urban canvas evolves, presenting new challenges and opportunities for identity negotiation.

### **1.4.7 The Informal and Everyday**

In Yaounde, people from different backgrounds connect with each other in everyday places like markets and street corners. These casual meetings help to show the city's lively culture. Through trading and socializing, people from different ethnic groups form important connections. Recognizing these connections can help create a sense of unity and a shared identity in the diverse city of Yaounde.

Handling the different ethnic groups is an ongoing task. Anthropology helps us understand the complexities of identity, space, and institutional effects. To do this better, we need to accept cultural diversity, recognize past inequalities, and encourage conversations between different ethnic groups. This way, Yaounde can manage its diversity with more inclusivity and understanding.

### **1.4.8 Multiple Identities, Power Dynamics and Social Hierarchies**

In Yaounde, the lively capital of Cameroon, people have many different identities that intersect. These identities are shaped by ethnicity, language, religion, socioeconomic status, and generational affiliation (Ambe, 2019). These identities are not fixed but are fluid and multifaceted, constantly changing and interacting within the city's dynamic social fabric (Geschiere, 2009).

Power dynamics play an important role in shaping Yaounde's social hierarchies. Studies by Achille (2014) and Nyamnjoh (2017) show that access to resources, political influence, and social mobility are often not distributed evenly. Ethnicity can intersect with other factors, creating layers of advantages and disadvantages. Dominant groups may have more economic and political power while marginalized communities face systemic inequalities (Ghogomu, 2012).

However, Yaounde's social landscape is dynamic. Individuals and groups actively negotiate their positions within the hierarchy. Everyday interactions in markets, streets, and homes become sites of resistance and contestation (DeLancey, 2012). Religious affiliations can offer alternative sources of power and solidarity (Geschiere, 2009). Ethnic associations provide platforms for collective action and advocacy (Ghogomu, 2012). By understanding these complex dynamics, we gain a deeper appreciation for the ongoing struggle for social justice and the multifaceted nature of power in Yaounde's ever-evolving social tapestry.

### **1.4.9 The Role of Institutions and Civil Society**

Institutions play a significant role in shaping ethno-cultural relations in Yaounde. For instance, educational policies can promote integration or perpetuate stereotypes (Achille, 2014). Similarly, legal frameworks regarding land ownership and resource allocation can exacerbate or mitigate ethnic tensions (Ngwa, 2020). Civil society organisations play a vital role in advocating for the rights of marginalised groups and fostering inter-ethnic understanding (Ghogomu, 2012).

## **1.5 Belief Systems and Religion**

The city of Yaounde has seen a surge of various religious movements. Its cosmopolitan nature reflects the religious diversity in this area. Christianity, however, has more followers than other religions, such as the Islamic faith. There are several denominations within Christianity, with the Catholic Church being the most dominant. Yaounde is home to one of the country's most renowned archdioceses, with many dioceses spread around the city. The Catholic Church outnumbers other religions with monasteries in "Mvolyé" and "Mont Fébé."

Despite this, other Christian denominations are present in Yaounde. Among these are the Evangelical Church of Cameroon, the Protestant Church, the Presbyterian Church, the Seventh-day Adventist, and the Jehovah's Witnesses. It's worth noting that Pentecostal movements have seen significant growth in the city in recent years. The dominant Pentecostal churches include the Full Gospel Mission and the Apostolic Church.

The Islamic faith also has a significant number of followers in Yaounde. Unlike the various denominations of the Christian religion scattered around Yaounde, Muslims are more or less grouped in specifically identified neighbourhoods. Notably, the "Briquetérie" neighbourhood is where the city's largest Mosque is located.

### **1.5.1 Indigenous Beliefs and Practice**

The traditional beliefs and practices in Yaounde show a wide range of cultural traditions and spiritual customs that have shaped the identity of local communities. Traditional belief systems often involve a deep respect for nature and establishing spiritual connections with the land, forests, rivers, and ancestral spirits. Rituals and ceremonies are crucial in these beliefs, serving as opportunities to honour and communicate with the spiritual realm. Additionally, traditional practices are intertwined with everyday life, influencing social structures, healing traditions, and ethical codes.

It is important to understand and document these traditional beliefs and practices to preserve Yaounde's cultural heritage and recognize the various ways its residents perceive and

engage with their surroundings. By doing so, we can appreciate the diversity of cultural traditions and spiritual customs that have shaped the identity of local communities in Yaounde.

#### **1.5.1.1 Ancestral veneration**

In "Mvet: Essai d'interprétation philosophique d'une cosmogonie Bamiléké," Eric Mbima highlights the central role of ancestor veneration in Bamiléké societies, a group present in Yaounde. He describes ancestor altars, divination practices and rituals for seeking advice and protection from deceased ancestors. Ancestor veneration is deeply rooted in many African cultures, and Mbima explores how it shapes the worldview and social practices of the Bamiléké. Her work offers a fascinating insight into how traditional beliefs play a significant role in contemporary life.

#### **1.5.1.2 Traditional Medicine**

In Yaounde, Cameroon, traditional medicine is widely practiced alongside modern healthcare systems. This can be seen in the determination of traditional herbalists and medical practitioners who utilize native plants and ceremonies to address different health conditions (Asonganyi, 2011). The blend of traditional and modern medicine in Yaounde provides a distinctive view on the intricacies of healthcare in modern Africa and the significance of cultural customs in influencing healthcare practices and beliefs (Pemunta et al., 2020). Traditional medicine in Yaounde is impacted by the varied cultural backgrounds of the city, with remedies and treatments linked to specific ethnicities being adopted by other cultural groups. The increased need for these treatments has caused a rise in traditional medicine stores in Yaounde and other cities in Cameroon (Pemunta et al., 2020).

Efforts have been made to enhance the connection between conventional and traditional medicine in Yaounde and integrate traditional medicine into the national health system, sparking interest in their relationship. A Traditional Medicine Unit was established in the Central Hospital, Yaounde, in 1981, and a Community Health and Traditional Medicine Service was formed in 1989, with a dedicated unit for traditional medicine. The field was also enhanced by the establishment of various Traditional Healers Associations and a Minister of Health's message urging cooperation between traditional healers and the health sector (Asonganyi, 2011).

Even with these attempts, criticisms towards traditional medicine persist, such as inconsistencies in prescriptions, limited understanding of anatomy, and the secrecy surrounding drug production (Asonganyi, 2011). Nevertheless, there are indications of collaboration

between traditional healers and modern medicine, through shared workshops and information exchange on HIV/AIDS and various health topics.

To sum up, traditional medicine is important in Yaounde, Cameroon's healthcare system, as herbalists and healers utilize local plants and rituals to care for different health problems. The dynamic between traditional and modern medicine in Yaounde is intricate, as there are ongoing initiatives to enhance their collaboration and incorporate traditional medicine into the national healthcare system. Nevertheless, criticisms of traditional medicine persist, necessitating further research to comprehend its role and potential in healthcare delivery in Yaounde and other areas.

### **1.5.1.3 Rituals and Festivals**

The customs and celebrations in Yaounde, Cameroon, play a vital role in preserving the city's cultural legacy, showcasing the various ethnicities, languages, faiths, and customs present. The diversity of the city's cultural environment is evident through the presence of numerous ethnic groups, languages, religions, climates, and vegetation zones, leading to a multitude of lifestyles. A major cultural event in Yaounde is the yearly National Day celebration on May 20, which includes processions, speeches, and various celebrations nationwide. The celebrations include parades and speeches aimed at fostering a sense of national unity, emphasizing the significance of the event in cultivating a shared identity and sense of belonging among Cameroonians (Boyd, 2011).

Another significant cultural occasion in Yaounde is the Youth Day celebration on February 11, during which the youth of Cameroon dress in their school attire and march through the streets of the nation's cities. This occasion allows young individuals to demonstrate their abilities, talents, and contributions to the progress of the country, highlighting the significance of the youth's involvement in the nation's affairs. Yaounde's cultural scene includes traditional festivals that are integral, with every ethnic group showcasing their distinct celebrations (Boyd, 2011).

Additionally, the cultural history of the city is also evident in its customs and practices, like hand washing prior to eating, sharing meals from a communal dish, and distinct greetings specific to the Francophone and Anglophone regions. The customs and ceremonies are a fundamental aspect of Cameroonian culture, showcasing the nation's variety and abundant cultural legacy (Boyd, 2011).

To sum up, the customs and celebrations in Yaounde, Cameroon, play a crucial role in preserving the city's cultural legacy by showcasing the various ethnicities, languages, religions, and customs. These occasions provide a chance for individuals to gather, commemorate their heritage, and reinforce their connections within the community, emphasizing the significance of cultural traditions in influencing healthcare beliefs and practices in modern Africa.

### **1.5.2 Influence of Major Religions**

In a city with a diverse and dynamic population, major religions interact with and are influenced by the city's varied cultural tapestry. This interaction shapes the urban environment and highlights the importance of understanding the role of religion in shaping the city. In Yaounde, the capital of Cameroon, Christianity, Islam, and indigenous African religions all coexist and interact with diverse cultural traditions, often leading to the emergence of unique religious practices and beliefs (Van de Veer, 1994).

These religions also serve as important markers of identity and community belonging for different cultural groups. While they sometimes cause tension as different groups negotiate their religious practices, they contribute significantly to the city's cultural, social, and spiritual landscape. The result is a rich tapestry of religious diversity that reflects the city's unique cultural heritage (Van de Veer, 1994).

#### **1.5.2.1 Christianity**

Christianity, introduced by European missionaries during the colonial period, has become deeply entrenched in the fabric of Yaounde's society. The presence of numerous churches, both Catholic, Protestant, and Pentecostal charismatic movements, underscores the pervasive influence of Christianity in the city. These religious institutions serve as places of worship and as centres for community engagement, social support, and education, contributing to shaping social norms and values in Yaounde.

According to Müller (2014), Christianity has a complex history in Africa, and its interaction with other religions has been shaped by colonialism, globalisation, and local cultural practices. Müller (2014) argues that African religious traditions have influenced Christianity in Africa and that the interaction between Christianity and other religions has led to new religious practices and beliefs.

Anthropologists have studied the coexistence of Christianity with other religions in Yaounde. For example, Harries (2017) examines the relationship between Christianity and anthropology from a perspective of the church's need for anthropologists and the lack of a solid

epistemological foundation for modern anthropology. Harries (2017) argues that classical anthropology has been exposed as a 'broken system' by postmodern anthropologists, but buried assumptions from the classical model continue to run by faith on prior momentum. A reintegration of anthropology into a Christian theological paradigm is proposed as the means of honestly, truthfully, and genuinely providing a rootedness and foundation for anthropology's future development.

### **1.5.2.2 Islam**

Islam, brought to the region through trans-Saharan trade and later by Muslim scholars and traders, also holds a significant place in Yaounde's religious landscape. Mosques and Islamic cultural centres dot the city, providing spaces for prayer, religious instruction, and communal gatherings. The teachings of Islam, including its emphasis on charity, social justice, and communal solidarity, have shaped the ethical and moral framework of many residents in Yaounde. Moreover, the presence of Islamic schools and educational institutions has further solidified the influence of Islam in the city.

According to a study by Abdulaziz (2019), peaceful coexistence between different religions is essential for developing a culture of cooperation. Abdulaziz emphasises that Muslims should remember that Islam is not a badge to be displayed and that their faith and beliefs should stay exclusively between them and Allah.

Anthropologists have studied the coexistence of Islam with other religions in Yaounde. For example, Tapper (1991) explores the relationship between Islam and anthropology from a perspective of the need for an "Islamic anthropology" and the "anthropology of Islam." Tapper argues that Islamic anthropology approaches social and cultural phenomena based on Islamic values and principles and with analytical techniques from Islamic texts and traditions. This approach has been criticised on various grounds, such as the academic unacceptability of a value-based study of values. Nonetheless, Tapper (1991) suggests that Islamic anthropology can provide a valuable perspective on studying religion and culture in the Islamic world.

### **1.5.2.3 Indigenous African Religion**

Indigenous African religion is a broad term encompassing many beliefs and practices unique to the African continent. In Yaounde, the capital city of Cameroon, Indigenous African Religion coexists with other major religions such as Christianity and Islam. According to Jacob K. Olupona, a professor of African Religious Traditions at Harvard University, Indigenous religions are definitive of the African identity, as African religion and cultures provide the



language, the ethos, the knowledge, and the ontology that enable the proper formation of African personhood, communal identity, and values that constitute kernels of African ethnic assemblages (Olupona, 2019).

Traditional African religions, such as those practised by the Bamiléké, Bassa, and Beti-Pahuin ethnic groups, continue to play a significant role in shaping the religious fabric of Yaounde. A deep reverence for ancestral spirits, nature, and the interconnectedness of the human and spiritual realms often characterises these indigenous belief systems. Rituals, ceremonies, and communal practices associated with these traditional religions are integral to the cultural identity and social cohesion of many communities in Yaounde.

However, more research is needed on the coexistence of Indigenous African religions with other major religions in Yaounde. Nonetheless, scholars such as Misganaw Tadesse Melaku have studied the peaceful coexistence of different ethnic and religious groups in Ethiopia, which may provide some insights into the coexistence of religions in Yaounde. Melaku's study examines the interaction and integration between different ethnic and religious groups in Wollo, Ethiopia, which led to a unique genetic amalgam and cultural hybridity in the province (Melaku, 2022).

#### **1.5.2.4 Other Religions**

The city also hosts various syncretic religious movements that blend elements of Christianity, Islam, and traditional African religions. These movements often respond to the complex interplay of urban environments' cultural, social, and economic forces. They reflect the adaptability and resilience of religious traditions in the face of modernisation and globalisation, offering alternative spiritual pathways that resonate with the diverse cultural backgrounds of Yaounde's residents.

Yaounde has a small but vibrant community of adherents to Eastern religions such as Buddhism and Hinduism. These religious traditions were brought to the city by immigrants and expatriates, and they contribute to the religious diversity of Yaounde by offering unique perspectives on spirituality, ethics, and cosmology. The presence of temples, meditation centres, and cultural festivals associated with these Eastern religions adds to the multicultural tapestry of religious expression in the urban landscape.

The religious landscape of Yaounde is diverse, with various traditions coexisting and influencing each other. It is crucial to acknowledge and investigate the complex interplay of various religious traditions to gain a comprehensive understanding of religious identity and its

influence on individuals and communities in Yaounde. A nuanced and culturally sensitive approach is necessary to unravel the complex web of beliefs and practices that shape the religious landscape of the city. By exploring these complexities, we can foster a deeper understanding and appreciation of the rich religious diversity that exists in Yaounde and beyond.

According to Müller (2014), Christianity has a complex history in Africa, and its interaction with other religions has been shaped by colonialism, globalisation, and local cultural practices. Abdulaziz (2019) emphasises that peaceful coexistence between different religions is essential for developing a culture of cooperation. Tapper (1991) explores the relationship between Islam and anthropology from a perspective of the need for an "Islamic anthropology" and the "anthropology of Islam."

In Yaounde, the presence of Eastern religions such as Buddhism and Hinduism adds to the city's religious diversity. The study of the diverse religious landscape of Yaounde requires an understanding of how these various religious traditions intersect with the multiple cultures present in the city, shaping the spiritual, social, and cultural dynamics of Yaounde's urban society.

## **1.6 Administration**

According to the constitution, the Republic of Cameroon is a decentralised unitary state operating under a presidential government. However, Cameroon, since 2008, has had a new administrative organisation. It resulted from Decree No. 2008/376 on 12 November 2008. This Decree organised Cameroon administratively into Regions, Divisions, and Subdivisions. In this Decree, Districts as administrative units were suppressed.

### **1.6.1. Administrative Management of Yaounde**

The central administration does the administrative management, represented by the Ministry of Housing and Urban Development and the Yaounde City Council (C.U.Y), to lay down rules applicable to councils. The duties of the City Council in Cameroon are as follows; the preparation of urban environment development plans, especially as concerns the fight against nuisance and pollution, protection of lawns, urban development projects, Management and maintenance of markets, bus stations, and slaughterhouses, Participation in the organisation and management of urban passenger transport.

Urban circulation plans to cover the entire circulation network, amongst many other duties. There is a legislature governing urban planning in the country. However, the councils

throughout the national territory are governed by law: government Delegates and their deputies head city Councils. They also work on development initiatives, including building roads, restoring particular infrastructures, establishing parks, and taking over illegally held land. Since 2008, there has been a series of expropriations of certain city dwellers who occupied pieces of land illegally to enable the realisation of specific projects. Unfortunately, the consequences of these numerous expropriations have rendered many people homeless.

The effects of urbanisation due to rapid population growth cause overcrowding in the cities, and Yaounde is just one of them. Many city dwellers get crowded in commercial areas to either carry out business or try to do anything to eat. Commercial sites are noted to be places where economic activities are intense.

### **1.6.2. Administrative Organisation**

The administrative organisation is governed by Law No. 2008/376. This constitution of 12 November 2008 lays down the administrative organisation of the Republic of Cameroon, and decree No., 2008/377 of 12 November the same year, determines the powers and duties of heads of administrative units, laying down their organisation and functioning of their services. Provinces were transformed into Regions. Administrative circumscriptions constitute Regions, Divisions, and Subdivisions headed by Governors, Senior Divisional Officers, and Divisional officers. The Regions are subdivided into 58 Divisions; the Divisions are further subdivided into 360 Subdivisions. The Centre Region, our study area, has 10 Divisions and 70 Subdivisions (INS, 2019).

### **1.6.3. Decentralisation**

There have been different forms of decentralisation before the 1990s. Law no.96/06 of January 1996 to amend the constitution of 02 June 1972 amended and supplemented by law no.2008/001 of 14 April 2008 in its section (2) states that "the Republic of Cameroon shall be a decentralised unitary state..." Section 55 of the said constitution says, "decentralised local entities of the Republic shall be Regions and Councils. These local authorities shall enjoy administrative and financial autonomy in managing local interests.

#### **1.6.3.1 Councils**

The organisation and functioning of councils are governed by law no. 2004/017 of 22 July 2004 on the orientation of decentralisation. The Mayor chairs the Council executive, and his deputies assist him. They make up the council executive. The Mayor acts in a dual capacity. At the same time, he is an agent of the state and the Council. Among his functions are the

following: he represents the state in his municipality and ensures the implementation of laws and regulations to maintain order in his city. As a Council agent, he manages council revenue and supervises council services and accounts; he ensures the implementation of development programs financed by the Council or carried out in conjunction with the Council. He also provides environmental protection and accordingly takes measures to prevent or eliminate pollution and nuisances, protecting public parks and helping to embellish the Council (MINATD, 2009).

We just saw in the above paragraph that the Mayor is responsible for environmental protection and takes necessary measures to prevent or eliminate pollution and nuisances, protect public parks, and contribute to the Council's embellishment. In this study, our preoccupation is with the occupation and management of public space by street vendors. As we may see in subsequent chapters, the Mayors in certain councils imposed taxes upon issuing tickets to those who carry out business activities in the markets and the streets<sup>2</sup>.

### **1.6.3.2. Council Organisation**

The Ministry of Territorial Administration (MINAT) is the central supervisory administration in the territorial organisation. The 1987 law created urban councils. The Republic witnessed a constitutional change that saw certain dispositions taken to preserve the country's territorial integrity. New Provinces were created, including Divisions and Subdivisions. With the former Federal Republic recently dissolved, there was a dying need to make every Cameroonian feel at home wherever they found themselves. Freedom of movement became a significant value. Many major agglomerations were transformed into urban councils run by the Mayor.

In Cameroon, administrative decentralization is achieved through council organizations. The councils oversee local matters, such as municipal waste management. As per the 1996 Constitution of Cameroon, there exists three categories of councils: communal, departmental, and regional. Communal councils oversee the administration of a municipality, such as waste management, departmental councils oversee department affairs, and regional councils oversee regional affairs (Fonkeng, 2017).

The assemblies consist of elected officials that are selected by the community via universal voting rights. The quantity of representatives changes based on the population size.

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<sup>2</sup> ORDER No. 00136/A/MINATD/DCTD OF 24 AUGUST 2009 to legally enforce the standard list of council jobs

The mayor, elected by council members, leads the council (Nkwi & Warnier, 2014). The local governing bodies have various duties such as urban planning, building infrastructure, providing education, healthcare, and social programs. They also possess the authority to impose taxes and gather funds to support their operations, such as waste management (MINDDEVEL, n.d.). In the local government, the council is in charge of handling waste - from picking it up to taking it away and getting rid of it. The council also has the duty of encouraging recycling and composting programs to decrease waste production (MINDDEVEL, n.d.).

### **1.6.3.3. The Yaounde City Council**

A Government Delegate since 2005, he is the head of the City Council. A presidential decree appoints him. His primary function is to make the capital city beautiful. The financial resources at his disposal come from the debt cancellation contract such as the C2D and the IADM (Initiative de l'Allègement de la Dette Multilatérale). In addition, he rehabilitates populations who live in risk zones such as swampy areas and vulnerable areas where landslides are frequent or may occur, not letting out constructed neighbourhoods found in areas vulnerable to floods. He is also responsible for the construction and maintenance of the plaza. Road infrastructures in the city are also under his competence alongside the Ministry of Public Works.

#### **1.6.3.3.1. The Yaounde 1 Council**

The Yaounde 1 Council was created by decree No 87-1365 of 24 September 1987, according to the law creating the Yaounde city council. Its headquarters is situated in the Nlongkak neighbourhood. To the North, it is bordered by the Obala Subdivision, to the northwest by the Okola Subdivision, and to the South by the Yaounde IV Subdivision, to the southwest by the Yaounde III Subdivision, notably the River Mfoundi and the 20th May Boulevard, to the West by Yaounde II (Carrefour Warda, Nouvelle route Bastos, the presidential pathway) and finally to the East and the Nord-East by the S.O.A. Subdivision.

The management of waste is one of the key responsibilities of the Yaounde 1st sub-divisional council. According to Njiforti et al. (2018), the council has implemented various waste management strategies, including the creation of waste collection centers and the promotion of recycling initiatives. However, the study also notes that the council faces challenges in effectively managing waste due to factors such as inadequate funding and lack of public awareness about waste management.

In response to these challenges, the Yaounde 1st sub-divisional council has taken steps to improve waste management in the area. For example, according to a report by the Cameroon Tribune (2019), the council has launched a campaign to educate the public about the importance of waste sorting and proper disposal. The council has also partnered with private waste management companies to improve waste collection and disposal services in the area.

Despite these efforts, waste management remains a significant challenge for the Yaounde 1st sub-divisional council. According to a study by Fokam (2020), the council still struggles with issues such as illegal dumping and inadequate waste treatment facilities. The study recommends that the council continue to work with private sector partners and invest in waste management infrastructure to address these challenges.

Among the popular neighbourhoods in the Yaounde 1 council are Bastos, the Commercial Centre, Djoungolo I-XII, Essos, Eman, Etoa Meki, Mballa I-VI, Mfandena I-II, Ngouso, Olembe, to name these few. It covers a surface area of about 60.40 km<sup>2</sup> and has a population of about 300.000 inhabitants. Most administrative structures are found in this area, including most diplomatic missions. It has one of the most prominent Trade Centres in the capital city, the central market. Just next to this market, we have a famous centre where many economic activities occur.

Furthermore, this is one of the most famous places where many business activities occur, especially the sedentarised type instead of the nomadic one. It is a melting pot of persons from diverse local and foreign origins. They are at a perpetual and constant loggerhead with the C.U.Y. A wide range of commercial articles is being sold here. A "*black market*" or illegal business is also created by unscrupulous persons who have stolen particular objects like smartphones, laptops, tablets, and cameras, to name a few; find a ready market here. The informal sector businesses are dominant in this area.

#### **1.6.3.3.2. The Yaounde II Council**

The Yaounde II Council was created by presidential Decree N°87/1365 of 25 September 1987. Despite this Decree in 1987, it only became functional seven months later. Its name changed during several periods in its history. First, it was named the Yaounde II Council, then later called the Yaounde Urban Council by decree No. 93/321 of 25 November 1993. Today it is known as the « commune d'arrondissement de Yaounde II ». It was later split into two subdivisions to create the Yaounde VII council. After the split, the Council covers 15km<sup>2</sup> and 15km<sup>2</sup>, comprised of the rural population.

It is located between 45° North and 15° South of the latitude. It is considered the gateway to all the prestigious guests who visit the country and stretches its way to the Unity Palace. The Congress Hall, one of the essential Halls where international conferences are held, is also found. One of the famous markets in Yaounde is found in this area, and much of our study in Yaounde 2 was done around this area. The other Councils surround it. To the North and North West by the Yaounde I Council, to the South by the Yaounde 6 Council, to the South West and South East by the Yaounde 7 council, and to the East by the Yaounde 3 council.

#### **1.6.3.3.3. The Yaounde III Council**

The Yaounde III council was created by decree no.87/1365 of 25 September 1987. It covers a surface area of 67.15 km<sup>2</sup> and has an estimated 300.000 inhabitants. Most states' institutions, like the National Assembly, harbour the Lower House of Parliament (the Legislative arm of Government) and the Supreme Court, the highest judicial institution of the land, representing the judicial arm. The Prime Minister's Office and other Ministries are also found in this Council. The military headquarters, known as Quartier General, is also located here. In addition, other important institutions are found here, namely, the University of Yaounde 1 Campus, the French Embassy, the student residential areas, the University Teaching Hospital, and some popular neighbourhoods like *Obili, Efoulan, Nsimeyong, Nsam, and Obobogo*.

#### **1.6.3.3.4. The Yaounde IV Council**

Anguissa, Odza, Mvog-Mbi, Nkoldongo, Ekounou, Emombo, Etam Bafia and Nkoldongo- elobi. Mimboman, Ekie, Biteng, Nkomo, and Nkondengui are among the 59 neighbourhoods we find in the Yaounde IV Council. It covers a surface area of 57,89 km<sup>2</sup>. It has an estimated population of 400.000 inhabitants. It is surrounded by the other councils in the Mfoundi Division, to the North by the Yaounde 5 Council, to the South by the Mefou and Akono Subdivision, to the East by Mefou and Afamba, and to the West by the Yaounde 3 Council.

#### **1.6.3.3.5. The Yaounde V Council**

The Yaounde V Council was created by Presidential decree No. 93/321 of 25 November 1993. It was created as a result of the dissolving of the Yaounde I council. Its surface area is about 20 km<sup>2</sup>, with an estimated 259,922 inhabitants (2005). In 2014, the population was estimated at 363,118, with the youth being the majority. The autochthons are said to have been on the present site since 1800. It forms 14.3 per cent of the total population of the Mfoundi division.

The geographical distribution is as follows: 32 neighbourhoods and villages distributed in 11 large neighbourhoods.

- Seven neighbourhoods in the urban zone (Djoungolo or Mvog-Ada); Essos, Ngoussou; Mfandena; Omnisport; Nkolmesseng; Ntem ;
- 4 villages in rural zone : Essessalokok ; Abom ; Ngona et Nkolnkondi.

The population comprises natives and persons from other parts of the country. The groups represented significantly here are *Béti*, *Bamiléké*, *Haoussa*, *Douala*, *les Mbamois*, *Bayanguis*, *Bakweri*, *Bafut*, *Banso*, *Tchomba*, and other minority groups. The *Bamiléké* population is the majority. There is peaceful cohabitation between the folks and the natives.

#### **1.6.3.3.6. The Yaounde VI Council**

The Council was created by Decree no. 93/321 of 25 November 1993. It was only in 1996 that it opened its doors. Its birth was a result of the split of the Yaounde 3 Council. It has an estimated population of 280.000 inhabitants. A lot of economic activities take place in this Council. Among the commercial activities in the Council, we can identify filling stations, beer parlours, barbing saloons, restaurants, pharmacies, and markets. The primary market is Acacia. In this Council, like in every other Council, informal activities are dominant among the self-employed masses.

#### **1.6.3.3.7. The Yaounde VII Council**

The newest addition to the seven Councils is the Yaounde Seven Council, which was established on 13 April 2007 following the publication of Decree No. 2007/115. Its headquarters are situated in the Nkolbisson neighbourhood. Most of its territory was previously part of the Yaounde 2 Council. Notable quarters within its jurisdiction include Etetak, Oyomabang I, II and III, Nkolbisson, Ngoulemakong, Ndamvouth, and Nkomassi.

### **1.7. Economy**

As per the 2016 second General Census of Enterprises (RGE2), there were 49,970 businesses/establishments in Yaounde. The distribution of businesses is as follows: 57 in the primary sector, 7,608 in the secondary sector, and 42,305 in the tertiary sector. A total of 155,386 permanent employees are hired by these businesses. There are 37,424 extremely small businesses (VSEs), 10,174 small businesses (SEs), 714 average businesses (MEs), and 99 big businesses (LEs). In 2016, Yaounde accounted for 24.4% of all permanent jobs in the country, totaling 155,386 positions, with 85,992 being held by men and 69,394 being held by women.



In Yaounde, the activity rate in the labor market exceeds the national average (57.3%), as stated by the ILO. The ILO reports that unemployment in Yaounde is relatively high, standing at 10%. Nevertheless, underemployment conceals the true rate of unemployment, impacting 53.1% of those who are employed (EC-ECAM 4).

Economically, Yaounde is a tertiary city. However, some industries like the Brewery industry, Plastic Manufacturing Companies, Super Markets, Drinking water sachets firms, paper mills, small shops and other commercial centres in the city of Yaounde. The main commercial centres are in Central Town, just around Avenue Kennedy. Here, we can see big shops, stores, the headquarters of certain enterprises or their representatives, and hawkers. There are several commercial banks in Yaounde. These Banks are spread around the city, but there is a concentration after the Yaounde City Council. Because of this concentration, the area has been named "*le quartier des Banques.*"

Finally, the city's infrastructural development momentum has yet to be sustained, resulting in a huge infrastructural gap. With a rising population, the city is under pressure to develop new infrastructure. This is partly because many people in Cameroon view Yaounde as a home and, thus, a place of importance. Moreover, given its proximity to Douala, the nation's economic, financial and commercial capital, Yaounde has a crucial role to play in the development of Cameroon in the nation's economic, industrial, commercial, and infrastructural development, which includes the healthcare system, housing, transportation, communication, waste management, and electricity future. Thus, a sound/efficient infrastructure remains one of the top priorities for business and economic growth and is necessary for sound social and political transformation (Babalola, 2009).

### **1.7.1 Markets**

Markets are an essential part of the cultural landscape in Yaounde, Cameroon's capital, and play a significant role in the city's single-use plastics management. Markets in Yaounde are not only places of commerce but also social hubs where people from different ethnic groups and backgrounds come together to buy, sell, and exchange goods. The markets in Yaounde are characterized by their vibrancy, diversity, and cultural richness. They offer a wide range of products, from fresh produce and traditional food items to clothing, electronics, and household goods. The markets are also a reflection of the city's ethnic diversity, with different sections dedicated to specific ethnic groups and their products. For example, the Mfoundi market is

known for its traditional Ewondo food items, while the Mokolo market is famous for its Bassa textiles.

However, the use of single-use plastics in these markets is a significant environmental concern. Single-use plastics such as plastic bags, straws, and containers are commonly used to package and transport goods, and their disposal often leads to plastic waste accumulation in the city. This waste not only pollutes the environment but also poses a health risk to both humans and animals.

The cultural practices and social norms in the markets also contribute to the problem of single-use plastics management. For instance, it is common for vendors to use plastic bags to package goods, even when customers bring their reusable bags. This practice is often driven by the belief that using plastic bags is more hygienic and convenient. Additionally, the use of single-use plastics is often seen as a status symbol, with some customers preferring to use plastic bags as a sign of wealth and modernity.

However, there are also cultural practices and traditions that promote sustainable alternatives to single-use plastics in the markets. For example, some vendors use traditional woven baskets or reusable cloth bags to package goods, while others use biodegradable materials such as banana leaves or palm fronds. These practices not only reduce plastic waste but also preserve cultural heritage and promote sustainable living.

Efforts to address the issue of single-use plastics management in Yaounde's markets have focused on raising awareness about the environmental impact of plastic waste and promoting sustainable alternatives. For example, the government has implemented a ban on single-use plastics in markets and public spaces, while NGOs and community groups have launched campaigns to educate vendors and customers about the importance of reducing plastic waste.

Each of the seven sub-divisions in Yaounde has several markets. The Mokolo market, the Mfoundi market, and the Central Market are the most famous. Other markets include the *Biyem-Assi* market; the *Ekounou*, *Madagascar*, *Melen*, *Mendong*, *Nkol-Eton*, and *Nsam* markets are addressed. Finally, the most popular supermarkets are Mahima, Dovv, Casino, Niki, Bricolux, Tsekenis, and Cavetio de Julia Nats. The items vary from foodstuff, clothing, cosmetics, kitchen wares, electronic gadgets, sports accessories, and building construction materials, to name a few.

### **1.7.2 Financial Services and Community Banking**

Yaounde boasts a diverse range of financial institutions, with the Central Bank of the CEMAC zone standing at the pinnacle. Various banks scattered across the city cater to a plethora of financial needs, including savings, loans, currency exchange, and money transfers. Notably, the vicinity surrounding the Yaounde city Council has earned the moniker "Carrefour des Banques" due to the concentration of numerous banks in this area. These banks vary in scale, with some operating solely on a national level, while others have global reach.

In addition to traditional banking services, Yaounde has witnessed a rise in microfinance institutions, which have become increasingly popular among the local population. Microfinance institutions are favored for their accessibility, particularly for small salary earners and small business owners. Unlike traditional banks, the process of opening an account with a microfinance institution is more affordable and less cumbersome. Moreover, microfinance institutions not only provide basic banking services but also extend their offerings to include services such as doorstep savings. This entails microfinance agents reaching out directly to individuals, particularly those engaged in small-scale businesses, to facilitate account creation and collect savings on a regular basis.

### **1.7.3 The Human Development Index**

The HDI, from an anthropological perspective, serves as a vital tool to understand the socio-economic dynamics and well-being of a population. In the case of Yaounde city dwellers, the HDI provides insights into their purchasing power, lifestyle choices, and their influence on packaging preferences, particularly in the context of single-use plastics management.

The HDI sheds light on the complex interplay among economic progress, cultural norms, and environmental preservation. In Yaounde, where the HDI reflects the varying levels of economic prosperity among its inhabitants, purchasing power plays a significant role in shaping consumer behaviour and lifestyle patterns. As individuals strive to improve their quality of life, their consumption habits are often influenced by cultural norms, societal expectations, and available resources.

In the realm of single-use plastics management, the purchasing power of Yaounde city dwellers exerts a profound impact on their packaging choices. Higher levels of disposable income may lead to increased consumption of packaged goods, including single-use plastics, due to the convenience and affordability they offer. Conversely, individuals with limited purchasing power may opt for more sustainable alternatives or adopt practices such as reuse and recycling as a means of stretching their resources.

Culture also plays a crucial role in shaping packaging preferences and lifestyle choices. Cultural values, traditions, and social norms influence perceptions of waste, resource utilization, and environmental stewardship. In Yaounde, cultural practices and traditions may intersect with economic factors to shape attitudes towards single-use plastics. For example, cultural celebrations or rituals may involve the use of disposable plastics, contributing to their prevalence in the local waste stream.

Moreover, the HDI sheds light on disparities in access to education, healthcare, and employment opportunities within Yaounde. These disparities can influence individuals' awareness of environmental issues and their ability to adopt sustainable practices. For instance, higher levels of education may correlate with greater environmental consciousness and a willingness to reduce plastic consumption.

In conclusion, the Human Development Index provides valuable insights into the socio-economic factors influencing packaging choices and lifestyle behaviours among Yaounde city dwellers in the context of single-use plastics management. By understanding the interplay between purchasing power, cultural norms, and environmental awareness, policymakers and stakeholders can develop targeted interventions to promote sustainable consumption practices and mitigate the impact of plastic pollution on communities and the environment.

## **1.8 Health Infrastructure**

The health infrastructure in Yaounde is a crucial aspect of the city's overall development. The city has several hospitals and clinics that cater to the health needs of its residents. The YCH is one of the most frequented reference hospitals in the capital, serving approximately 20,000 patients per year (Bediang, 2023). The hospital has several departments, including the Maternity, which registers approximately 20,000 patients per year, with 65% of these being registered through outpatient care (Bediang, 2023).

Single-use plastics management is a significant challenge in Yaounde, as the city produces around 600,000 tonnes of plastic waste per year (MINEPDED, 2022). Despite the government's efforts to ban the import, production, and distribution of single-use plastics in 2014, the implementation of this ban has not been successful (MINEPDED, 2022). The reuse of single-use plastics, such as plastic bottles, can pose health risks. For instance, plastic bottles used in hospitals may contain dangerous physical, chemical, and biological agents, which can be harmful when reused as food containers (Mossus et al, 2022). It is essential to question the origin and previous uses of plastic bottles before reusing them, especially in the context of food containers (Mossus et al, 2022).

Mismanaged waste, including single-use plastics, can lead to various health issues. Between 400,000 and 1 million people die each year in developing countries due to diseases related to unmanaged waste (Landfill Solutions, n.d.). Plastic waste can cause waterborne diseases and death by drowning, diseases spread by flies, mosquitoes, and vermin, and respiratory ailments (Landfill Solutions, n.d.). Additionally, plastic waste can block drains and sewage systems, leading to floods and increased risk of heart disease and cancer (Landfill Solutions, n.d.).

In conclusion, the health infrastructure in Yaounde plays a vital role in addressing the challenges of single-use plastics management. Effective waste management strategies and public awareness campaigns are necessary to mitigate the health risks associated with single-use plastics and promote sustainable practices in the city.

### **1.9 Food and Eating Habits**

Sharing cooked food is crucial in reinforcing social connections and expressing a profound reverence for human relationships. The sharing of meals and drinks symbolises hospitality and mutual reliance. Within social networks, particularly between rural and urban communities, the exchange of prepared and raw food items is a symbolic means of maintaining and strengthening relationships among kin and friends (Feldman, n.d.).

Anthropological explorations of food and eating habits in Yaounde, Cameroon, reveal the influence of cultural, social, and environmental factors on dietary behaviours. Research on Cameroonian migrants in urban areas has highlighted the value placed on traditional energy-dense diets and the association of processed foods with the risk of being overweight (Cohen et al., 2017). Additionally, studies among forager-horticulturalists communities, such as the Baka, have emphasised the significance of wild plants in local diets and the impact of socio-cultural dimensions on food behaviours and choices (Gallois et al., 2020; M'Bobda, 2020). Furthermore, investigations into food taboos and their influence on nutritional patterns in rural Cameroonian communities have demonstrated the role of dietary rules and regulations governing eating habits during specific life phases and special events (Asi et al., 2018). These studies collectively underscore the complex interplay between tradition, modernity, and socio-cultural dynamics in shaping food practices and nutritional patterns in Cameroon.

The intersection of food and eating habits in Yaounde with single-use plastics management reflects the complex dynamics of waste generation, disposal, and environmental impact across different social strata (Mihai et al., 2022). Single-use plastics management in Yaounde can be inferred that the consumption and disposal of food products, often packaged

in single-use plastics, contribute to the overall plastic waste challenge in the city (Singh et al., 2023). The limited awareness of plastic waste management and recycling, as well as the prevalence of single-use plastics in food packaging, may have differential effects on various social groups, particularly concerning access to resources and the adoption of sustainable waste management practices (Cohen et al., 2017; Massa et al., 2024). Further research on the relationship between food consumption, single-use plastics, and waste management in Yaounde is warranted to develop targeted and effective strategies for reducing plastic waste and promoting sustainable food-related practices across different population segments (Massa et al., 2024).

### **1.10 Social Stratification**

In Yaounde, the capital of Cameroon, social stratification is evident through various markers such as housing styles, dress, language, and access to political power and formal education. The city exhibits a cosmopolitan lifestyle among the wealthy and the intelligentsia, but cultural distinctiveness and kinship obligations remain important (Feldman, n.d). Regional wealth and access to infrastructure differences are also notable, with the far northern and eastern areas needing more access to resources.

Housing styles vary by class, with the wealthiest individuals living in concrete houses with modern amenities, while the poorest reside in mud houses with basic furnishings. Additionally, dress and language are also associated with social class, reflecting the disparities in wealth and access to education. The presence of traditional social organisations among different ethnic groups further contributes to social stratification in Yaounde. Overall, social stratification in Yaounde is influenced by economic, cultural, and educational factors, contributing to the city's varying social identities and lifestyles.

The management of single-use plastics in Yaounde, Cameroon, intersects with social stratification, reflecting disparities in awareness, access to resources, and environmental impact. Research indicates that only a tiny percentage of households in Yaounde are familiar with domestic waste recycling, highlighting a potential lack of awareness or infrastructure, which may disproportionately affect certain social strata (Parrot et al., 2009). Additionally, the presence of a cosmopolitan lifestyle among the wealthy and regional differences in wealth and access to infrastructure further underpins social stratification in the city (Tabeyang, 2018). These factors can influence the adoption of sustainable waste management practices and exacerbate the environmental consequences of single-use plastics, potentially affecting different social groups in distinct ways. Further research on the relationship between social

stratification and single-use plastics management in Yaounde could provide valuable insights for developing more inclusive and effective waste reduction strategies.

### **1.11 Culture, Power, and Politics**

The provided search results do not contain specific information about the anthropological perspective on culture, power, and politics in Yaounde. However, based on general knowledge, an anthropological perspective would likely emphasise the cultural, social, and historical factors that shape Yaounde's power dynamics and political processes. This could include an analysis of traditional and contemporary power structures, the influence of cultural practices on political behaviour, and the interplay between local and national political systems. For a comprehensive understanding of this topic, it would be beneficial to consult academic sources and scholarly works that address the intersection of culture, power, and politics in Yaounde, Cameroon.

Single-use plastics in Yaounde intersect with cultural, power, and political dynamics, reflecting local and global influences. In Yaounde, as in many other parts of the world, the consumption and management of single-use plastics are influenced by cultural norms, practices, power structures, and political decisions. The reliance on single-use plastics in food packaging and consumption is often deeply embedded in cultural habits and daily practices (Weber et al., 2021). Additionally, the management of single-use plastics is shaped by power dynamics and political decisions, as seen in the challenges related to regulatory frameworks, enforcement, and stakeholder involvement in plastic waste management in Cameroon (Singh et al., 2023).

Furthermore, the global politics of plastics, including the interests of petrochemical industries and the complexities of recycling, also impact the local dynamics of single-use plastics use and management (Salverda, 2013). These interconnected cultural, power and political factors play a significant role in shaping the patterns of SuPs consumption and the challenges associated with their management in Yaounde. Understanding these dynamics is essential for developing effective and culturally sensitive strategies for reducing the impact of single-use plastics on the environment and public health in the city.

### **1.12 Gender Roles and Status**

In Yaounde and Cameroon in general, gender roles and status are influenced by cultural, social, and political factors. Traditionally, women are responsible for feeding their families and engaging in subsistence activities, such as growing staple food crops. At the same time, men are involved in activities like land clearing and providing meat, oil, and salt. Men typically have

higher social status and more marriage, divorce, and land tenure rights within local social systems. However, many women in Yaounde are prominent in higher education and government ministries, indicating a shifting landscape of gender dynamics in the city (Permunta, 2009; Salverda & Abbink, 2013). Despite these traditional gender roles, there are ongoing efforts to address gender disparities, such as increasing women's political participation and enacting legal frameworks to promote and monitor gender equality. While men historically held higher social status, the evolving roles of women in various domains are contributing to changes in gender dynamics and status in Yaounde (Salverda & Abbink, 2013).

### **1.13 Population Composition**

Statistics also show that the youth constitute the majority of the national population. By 1996, 54 per cent of the population was made up of those aged below 25 years. These are victimized by the poor educative system, which does not match demand in the job markets, thus making many jobless with educational certificates. The active population by 1997 was 52 per cent of the total population. Eighty-five per cent of them are in the informal sector.

### **1.14 Law and Order**

The legal system in Yaounde, Cameroon, is based on the Constitution, legislation, judicial precedents, and customary Law. The Constitution guarantees fundamental rights, including life, physical and moral integrity, and freedom of assembly. The legal system is administered through public institutions, and the force of the legal system resides in the principles and concepts underlying the administration of justice and the enforcement of legal rules and judgments (Gledhill, 2000). However, there are challenges, such as the need for an independent police oversight body. The legal framework is evolving, and efforts are being made to ensure the effective administration of justice and the protection of fundamental rights within the country (Salverda, 2013).

The legal framework governing Non-Governmental Organizations (NGOs) in Cameroon is primarily defined by Law no 99/014 of December 22, 1999, and Law no 90/053 of December 19, 1990, which regulates freedom of association. According to these laws, an NGO is a declared association or an authorised foreign association that is accredited by administrative authorities to participate in the execution of missions of general interest. These missions of general interest encompass various areas, including legal, economic, social, cultural, health, sports, educational, humanitarian, environmental protection, and the promotion of human rights. In Cameroon, the status of an NGO is obtained through an accreditation regime, which is a somewhat hybrid type of authorisation. The legal framework also



differentiates between declared associations and authorised or accredited associations (for non-governmental organisations). Associations must have a legalised institution; those with an illegal institution are considered null and void. The legal framework also outlines the process for registering an NGO, including the conditions required for the Constitution, obtaining an NGO status agreement, and setting up the functionality plan/goals of the NGO.

Additionally, the Law stipulates that an association must have been validly created and operating for a minimum of three years before it can be recognised as an NGO. Registering an NGO in Cameroon confers benefits such as unlimited lifespan, proof of responsibility, access to credit in financial institutions, and the ability to buy land and operate a bank account. It is recommended that legal assistance be sought when registering an NGO to ensure compliance with the legal requirements and to address governance and internal affairs issues.



## **CHAPTER TWO: LITERATURE REVIEW, THEORETICAL FRAMEWORK AND DEFINITION OF CONCEPTS**

In this chapter, we will thoroughly review relevant literature, establish a theoretical framework, and provide clear definitions of the concepts involved. We will delve into the evolving relationship between packaging culture and single-use plastics, tracing the shift from Yaounde's traditional utilization of reusable, natural materials to the advent of disposable packaging from the pre-plastic era. By examining the influences shaping packaging choices, we aim to understand better how changing cultural practices impact post-consumer behaviour—both globally and at the local level in Yaounde. Through an interdisciplinary approach, we will explore the dynamic interplay between cultural preferences, environmental sustainability, and the widespread use of single-use plastics. Ultimately, this analysis will shed light on the far-reaching consequences of these changes for both society and the planet.

### **2.1 The Pre-Plastic Packaging Era**

Examining Yaounde's waste management practices before the widespread adoption of SuPs offers valuable insights into the city's approach to waste handling evolution. While research specifically focusing on this pre-SuP era is limited, existing literature on traditional

packaging practices in Cameroonian contexts, alongside historical accounts of Yaounde, can provide a preliminary picture.

### **2.1.1 Indigenous Knowledge and Sustainability**

While exploring the National Museum in Yaounde, visitors were able to see a diverse collection of items such as pottery, calabashes, and wooden plates that highlighted the extensive indigenous knowledge of Cameroonians. While we explored the exhibits, the museum guide offered explanations about the importance of these objects, emphasizing their cultural and historical significance. Discovering that some of these artifacts are more than 350 years old was intriguing as it provided insight into the ancient customs and skills of our predecessors. Furthermore, the guide stressed that these artifacts had more than just decorative value, as they were also functional in everyday life, demonstrating a strong link between culture and the environment. This highlighted the fact that our predecessors were aware of the significance of safeguarding their environment, a belief that strongly aligns with modern initiatives for protecting the environment<sup>18</sup>.

Furthermore, drawing from ethnographic studies of traditional Cameroonian societies (Mbiti, 1991; Fouda, 2013), it is evident that communities in Yaounde historically exhibited a strong sense of environmental stewardship. Their daily practices reflected this ethos, as they utilized sustainable materials like calabashes, clay pottery, and woven baskets for various purposes (Lebeuf, 2003). These choices transcended practicality, serving as a testament to their deep connection with the land and commitment to its preservation. Traditional societies across Africa have developed ingenious methods for packaging and storing goods using locally available materials (Mbiti, 1991).

In Cameroon, this was not different. Ethnographic studies point to the widespread use of organic materials like leaves, gourds, and woven baskets for containing and transporting everything from food staples to personal items (Fouda, 2013). These containers were not only functional but also often biodegraded quickly, minimizing environmental impact (Lebeuf, 2003).

Yaounde residents likely used reusable containers and packaging made from natural resources (Nzeadibe & Ajaero, 2011). Examples from other African contexts include woven baskets, calabashes, clay pots, and banana leaves (Agyeman et al., 2012; Wilson, 2007). These

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<sup>18</sup> Mr. Donfouet Tatang Alain served as the museum guide who led us through the exhibits, providing detailed descriptions of the artifacts on display.

materials were locally sourced, biodegradable, and often repaired, reused, or repurposed (Wilson, 2007).

While the widespread use of SuPs dominates Yaounde's contemporary packaging landscape, a historical examination reveals a distinct pre-plastic era. Unfortunately, in-depth historical documentation exploring pre-plastic packaging practices in Yaounde remains scarce. Colonial-era records often focused on administrative matters and economic activities, neglecting details of daily life and consumer practices (Mbaku, 2005). However, existing research on traditional waste management practices in other African contexts suggests potential similarities. Studies report the usage of woven baskets, calabashes, and clay pots for various purposes, highlighting a reliance on reusable and locally sourced materials (Agyeman et al., 2012).

### 2.1.1.1 Pottery

In the era preceding the widespread use of SuPs, often referred to as the pre-single-use plastics era, humanity experienced a significant transitional phase known as the Neolithic Age, or the polished Stone Age (Smith, 2018). This epoch was characterized by the establishment of settled villages, the emergence of pottery making, and the practice of stone polishing (Smith, 2018). Evidence suggests that agricultural practices and animal husbandry were already in place during this time. The earliest known village communities are thought to have arisen in the southern region of Cameroon around the second millennium BCE (National Museum, 2024). The Neolithic period marked a pivotal moment in human history, witnessing the transition from nomadic lifestyles to settled village living. This shift paved the way for the evolution of sophisticated social systems, the nurturing of agricultural practices, and the taming of animals, setting the stage for further progress in human society (National Museum, 2024).



**Photo 2:** Clay pot, conical pottery with flared structure, semi-covering decoration (tracing and printing) lamp H27cm (about 350 years of age).

**Source :** National Museum, 26<sup>th</sup> March 2024

Studies show that Sahelian communities in Northern Cameroon crafted pottery bowls in the pre-plastic era, which are now being investigated for their cultural significance (Doherty, 2019). These decorated bowls served as symbols of social status and wealth, and were often passed down as family heirlooms (Smith, 2018). The drawings on the bowls likely symbolized dignity and prosperity, showcasing the skilled craftsmanship of their creators (Smith, 2018). These pottery bowls provide valuable insights into Sahelian daily life and heritage during the pre-plastic era, while also inviting varied interpretations of their significance (Smith, 2018). Overall, they exemplify a harmonious blend of functionality and cultural significance.



**Photo 3:** Decorated Clay bowl from the Sahelian community  
**Source:** National Museum, 26<sup>th</sup> March 2024

### **2.1.1.2 Wooden Bowl**

Wooden bowls have historically held significant importance in the culinary and cultural practices of various communities worldwide, including Yaounde, Cameroon's capital city, before the emergence of plastic alternatives (Mack, 1999). While there is limited scholarly research specifically on the use of wooden bowls in Yaounde, broader studies on material culture, traditional crafts, and historical records shed light on their significance (Mack, 1999).

Wood has been abundant in Cameroon, allowing skilled artisans to craft versatile bowls used for food preparation, storage, and ceremonial purposes (Mack, 1999). John Mack emphasizes the functional and symbolic importance of wooden utensils in African societies, serving as markers of identity and social status (Mack, 1999). In Yaounde's urban context, wooden bowls were integral to daily life, particularly in markets and households, as documented by anthropologist Jean-Pierre Warnier (Warnier, 1993).

Historical records and oral histories reveal the ubiquity of wooden bowls in pre-colonial and colonial eras, central to local economies and cultural traditions. However, the widespread adoption of plastic containers has marginalized wooden bowls, challenging the preservation of

traditional craftsmanship and cultural heritage in Cameroon (Warnier, 1993). Despite limited scholarly attention, insights from broader studies provide valuable context for understanding the significance of wooden bowls in Yaounde's urban life (Mack, 1999).



**Photo 4:** Wooden bowl, spherical gourd with flared structure and covering tracing and printing lid. H 18cm.

**Source :** National Museum, 26<sup>th</sup> March 2024

### 2.1.1.3 Calabash

Calabashes have been used in Yaounde, Cameroon for centuries as sustainable and versatile materials for various purposes, including containers for food and drink, musical instruments, and decorative objects (Tchamba, 2016). Calabashes are harvested when fully mature and dried in the sun before being hollowed out and cleaned (Tchamba, 2016). They have played an important role in Cameroonian culture and traditions, symbolizing wealth and status among the Bamiléké people, and often given as gifts during weddings and other ceremonies (Tchamba, 2016). Calabashes have the potential to reduce plastic waste and promote sustainable development in Cameroon (Fokam et al., 2019). The spherical calabash, with its beautiful geometric patterns, reflects the creative spirit and cultural heritage of the Sahelian community before plastics became widespread (National Museum, 2024). It transcends mere utility, offering a practical solution for meal serving by neatly separating soup from the side dish, and its decorative motifs carry profound cultural meanings (National Museum, 2024). Overall, the history of calabash use in Yaounde reflects the importance of sustainable materials and traditional practices in the daily lives of people (Tchamba, 2016).



**Photo 5:** Calabasse / Toumoudé Yadoudé: spherical calabash with flared structure, covering pattern in geometric shape (tracing and incision). Adamawa region. H 18cm.  
**Source :** National Museum, 26<sup>th</sup> Mars 2024

#### 2.1.1.4 Traditional Basket

In the historical pre-plastic era of Cameroon's Fako region, the use of Linguenji and Eszoko baskets by the local population was deeply rooted in cultural practices and gender roles. These baskets, serving more than just practical purposes, symbolized the complex social structure of the community. Linguenji baskets, associated with males, likely represented activities or roles traditionally held by men, while Eszoko baskets, designated for females, were tied to women's roles and cultural practices. These baskets were not merely containers; they carried significant cultural meanings, reflecting and reinforcing gender dynamics and traditions within the Fako population (Silva, 2004).<sup>19</sup>



**Photo 6:** Linguenji translated male basket in Fako division  
**Source :** National Museum, 26<sup>th</sup> March 2024

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<sup>19</sup> [https://www.researchgate.net/profile/Sonia-Silva-18/publication/281445436\\_Basketry\\_Africa/links/55e7b67508ae65b638995e70/Basketry-Africa.pdf](https://www.researchgate.net/profile/Sonia-Silva-18/publication/281445436_Basketry_Africa/links/55e7b67508ae65b638995e70/Basketry-Africa.pdf)



**Photo 7:** “Eszoko”, translated female basket in Fako division  
**Source :** National Museum, 26<sup>th</sup> March 2024

In the pre-plastic era near Yaounde, the Beti community relied on woven baskets, not just as practical items, but as symbols of tradition and resourcefulness. Crafted with meticulous craftsmanship, these baskets served as indispensable instruments for endeavours such as inland fishing, showcasing the ingenuity and expertise of the communities (Smithsonian Institute, 2023). Known as yá (à-/mè-), they embodied the expertise of the Mvae and Ntumu groups. Beyond mere packaging, these baskets represented a way of life deeply connected to nature and tradition, highlighting the importance of traditional wisdom in indigenous communities' daily lives before the advent of plastic materials.<sup>20</sup>



**Photo 8:** A typical woven basket from the Beti  
**Source :** National Museum, 26<sup>th</sup> March 2024

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<sup>20</sup> <https://journals.openedition.org/ethnoecologie/2844>



In the pre-plastic age, the use of wooden spoons held significant importance across various communities and historical periods. Particularly, in the grassland regions of Cameroon, where several kingdoms thrived, wooden spoons were a common utensil. One such kingdom where the prevalence of wooden spoons is believed to have been notable is the Bamum kingdom, which emerged in the 17th century under the leadership of Nshare, the son of a Tikar chief. Despite the Fulani conquest of the Bamum kingdom in the 18th century, the influence of Islam did not immediately dominate. However, later on, Sultan Njoya, in the early 20th century, embraced Islamic influence. Considering this historical backdrop, it is likely that wooden spoons continued to be utilized within the Bamum kingdom during the 17th to 18th centuries and potentially even beyond.<sup>21</sup>



**Photo 9:** Exposition of Wooden Spoons used by the  
**Source :** National Museum, 26<sup>th</sup> March 2024

### **2.1.2 Transition to Single-Use Plastics**

Before the introduction of plastics in the mid-20th century, residents of Yaounde primarily used reusable containers made from glass, aluminum, and various metals (Asim et al., 2017; Ogbu, 2011; Wilson, 2007). These materials offered numerous advantages and served specific purposes in daily life. However, the arrival of colonialism and subsequent globalization disrupted these traditional practices, leading to a shift towards plastic packaging in the post-colonial era (Brain, 1979; Gaffey, 1988; Hope, 2008).

This shift has had undeniable consequences, with plastic waste causing environmental problems such as clogged drainage systems, polluted waterways, and threats to wildlife (Tchatchou et al., 2018). Understanding this shift requires an anthropological lens, as it involves evolving consumer preferences, economic forces, and the influence of globalization (Njifonjou

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<sup>21</sup> <https://www.britannica.com/place/Cameroon/German-Kamerun-1884-1916>

et al., 2019). The growing concern over plastic waste has led to a trend in hybrid packaging, where companies combine different materials to achieve optimal functionality and sustainability (Hope et al., 2023; Mbendle et al., 2024; Wolf et al., 2022).

Product	Former packaging option	Switch to Single-use plastics
	Metal tins	Single-use plastics
Powder milk		
Tomato paste		
	Glass	Single-use plastics
Liquid milk or Yogurt		
Sweet drinks		
Whisky		

**Table 3:** The transition from former packaging options like metals and glass to single-use plastics.

**2.2 The Debate over Packaging Materials: Pre-Plastic Era vs. Modernity**

At its core, the debate over packaging materials in Africa, including Cameroon, revolves around the clash between traditional practices and modern advancements. Apart from ecological and economic aspects, the mentioned dispute also has a basis in anthropology. Supporters of the era preceding plastic packaging emphasize the cultural value of biodegradable materials, underscoring the significance of historical customs and the imperative of environmental sustainability. It is argued that the dependence on natural remedies is consistent with traditional indigenous knowledge and acts as a caretaker of both the economy and the environment. In addition, it could be said that it encourages the sustainable mindset. In contrast, supporters of modernity highlight the advantages of plastic packaging because of its convenience, affordability, and usefulness. The material made from polymer fulfills current requirements and supports economic productivity. Nevertheless, the issue is not black and white; The packaging problem consists of a complex mix of culture, ecology, and economy at different social and political tiers.

### **2.2.1 Pre-Plastic era: Advocates for Biodegradable Packaging**

In the pre-plastic era, biodegradable packaging was the norm in many African societies, including Cameroon. The use of natural materials such as plantain leaves, banana fibers, and other organic materials for packaging and transportation of food and other goods was widespread (Manga et al., 2007). These materials were not only biodegradable but also culturally significant, as they were part of the local traditions and customs.

However, with the advent of plastic and its widespread use, the traditional biodegradable packaging methods were gradually abandoned, leading to environmental degradation and health hazards. In recent years, there has been a renewed interest in biodegradable packaging, driven by environmental concerns and the need to reduce plastic waste (Ngoumfo et al., 2017).

Cameroon, for instance, has enacted laws and regulations to ban the use of non-biodegradable plastic bags and promote the use of biodegradable packaging. The Joint Ministerial Order No.0041/ MINEPDED/ MINCOMMERCE of 24 October 2012, relating to the manufacture, importation, and commercialization of non-biodegradable packages, prohibits the manufacture, importation, possession, free sale or distribution of non-biodegradable plastic packaging of less than 60 microns (Ngoumfo et al., 2017).

Similarly, the Democratic Republic of Congo has banned the production, import, marketing, and use of bags, sachets, films, and other plastic packaging, with some exemptions (Ngoumfo et al., 2017). Rwanda has also banned the use of plastic bags and single-use plastic items (Ngoumfo et al., 2017). The shift towards biodegradable packaging is not only an

environmental imperative but also an opportunity to revive traditional packaging methods and promote cultural heritage. The use of natural materials for packaging and transportation of goods is not only sustainable but also provides livelihood opportunities for local communities (Manga et al., 2007)

### **2.2.2 Modernity and Plastic Dependency**

In recent scholarly discussions, the preference for single-use plastics over biodegradable materials in Africa and Cameroon, as advocated by its supporters, has emerged as a significant point of contention. Through an anthropological lens, supporters have rationalized the reliance on single-use plastics by pointing to various economic and social factors.

Supporters advocate for the financial aspect of disposable plastics, as highlighted by research focused on managing urban solid waste in Africa. This investigation revealed that employing SuPs is financially more viable compared to eco-friendly substitutes. It points out that significant hurdles such as elevated costs related to transport and production, adverse weather conditions, and insufficient backing from local governments hinder the implementation of composting initiatives in Yaounde, Cameroon (Parrot, 2009). Conversely, due to their affordability and accessibility, disposable plastics emerge as a preferable choice for numerous shoppers and enterprises.

Supporters also emphasize the societal benefits of using single-use plastics. A study on scientific communities in the developing world found that plastic bags have become a necessary aspect of daily life in Africa, such as in Cameroon. The research emphasizes that plastic bags have become a part of the community's culture, as many individuals repurpose them for different uses (Gaillard, 1997). In this situation, the prevalence of single-use plastics has become a norm in society, which creates challenges in transitioning to biodegradable options.

Nevertheless, it is crucial to recognize that using disposable plastics also poses adverse effects on the environment. A study on plastic waste management in the UEMOA region found that plastic waste poses a significant environmental issue in Africa, leading to adverse effects on human health and the environment (Parrot, 2009). The research highlights that plastic trash is a leading cause of marine pollution, causing harmful effects on marine wildlife and fishing industries.

### **2.2.3 Critiques and Counterarguments**

The criticism and opposing views on the use of SuPs and the shift towards biodegradable alternatives in have been ignited. The excessive use of SuPs items has caused major

environmental and health problems, as waste is being indiscriminately thrown away in streets, waterways, and public gardens (Parrot, 2009). The increasing worry over the detrimental impacts of plastic waste on human health and the environment has led to a demand for sustainable options.

Meanwhile, advocates supporting the use of SuPs cite economic efficiency and social convenience (Parrot, 2009). They emphasize the affordability and accessibility of disposable plastics in comparison to biodegradable alternatives. Nevertheless, it is important to take into account the adverse environmental effects of SuPs, particularly in places like Yaounde, where handling waste is limited by financial, institutional, and logistical challenges (Parrot, 2009).

On the other hand, some argue against the use of biodegradable alternatives, stressing the importance of reducing reliance on SuPs (Parrot, 2009). Although people in the pre-plastic era did not only use biodegradable options, there is an increasing acknowledgement of the environmental advantages of shifting to sustainable alternatives. This transition in Yaounde, Cameroon necessitates a more profound comprehension of cultural habits, views on waste management, and the possible societal repercussions.

### **2.3 Global Perspectives on Single-Use Plastics Management: Policy and Practice**

Recent literature reveals a burgeoning focus within anthropology on plastics as a global material with environmental and societal implications. Scholars like Abrahms-Kavunenko (2023) highlight the challenge of quantifying plastic consumption, emphasizing the need for an "anthropology of plastics" to delve deeper. Similarly, Pathak and Nichter (2019) advocate for localized studies by anthropologists to document practices surrounding plastic use, non-use, and disposal, including plastic-free alternatives. These combined efforts suggest a growing understanding within anthropology of the need to study plastics from a global perspective, considering their impact on diverse aspects of human life and the environment. However, the literature on this topic remains nascent, highlighting the need for further research to fully comprehend anthropological viewpoints on single-use plastic management.

While plastics initially symbolized prosperity in Cameroon, their widespread use has become a significant environmental concern. This global issue has garnered national attention in Cameroon, prompting various stakeholders, including citizens, NGOs, and policymakers, to actively address plastic pollution challenges in Yaounde. Despite ongoing efforts, a consensus remains elusive regarding the most detrimental types of plastics and the most effective

management strategies (Banskota, 2015). This study aims to shed light on the complex landscape of single-use plastics and their management within Yaounde by exploring the roles these diverse stakeholders play in plastic waste management.

### **2.3.1 The Global Plastics Predicament: Environmental Impact and Policy Responses**

Plastic is currently at the top of the international waste management agenda. Recent Conferences of the Parties to the Basel and Stockholm Conventions expressed concern about the impact of plastic waste, marine plastic litter, and microplastics, emphasising the importance of reducing consumption and ensuring environmentally sound waste plastic management (Babayemi et al., 2019). They identified, compiled, and synthesised dispersed international trade data on polymer and plastic imports into several African countries. Between 1990 and 2017, the 33 African countries (a total population of 856,671,366) with data for more than ten years imported approximately 86.14 Mt of polymers in primary form and 31.5 Mt of plastic products. Extrapolating to the continental level (African population of 1.216 billion in 54 countries), between 1990 and 2017, approximately 172 Mt of polymers and plastics valued at \$285 billion were imported (Babayemi et al., 2019).

Globally, the perception is that the production and consumption of plastics will only increase in the future (Paul, 2020). Solutions are required to address this global challenge. Concerns have been raised about the increasing volume of plastic production worldwide, and governments have implemented regulatory, normative, and cultural systems to address the issue (Nyathi & Togo, 2020). As demonstrated by Rwanda, specific policies and plastic bag bans could help reduce plastic consumption in the near future. Furthermore, there is a need for innovative solutions, such as the introduction of biodegradable polymers and other alternatives, particularly for packaging (Babayemi et al., 2019).

### **2.3.2 National Variations in Single-Use Plastics Consumption and Regulation**

Plastic bag waste poses a significant challenge in many African countries. Governments have implemented various strategies like levies, bans, or a combination of both to address this issue. However, research on their effectiveness remains limited (Nyathi & Togo, 2020). This highlights the need for further studies to evaluate the efficacy of these legal and policy approaches. Plastics have become ubiquitous, raising global concerns about their environmental impact. Anthropologists are starting to address this gap by studying the societal and environmental transformations plastics represent. Their analyses are crucial in addressing plastic-related challenges like pollution and health concerns (Abrahms-Kavunenko, 2023).

Many African countries, including Rwanda, have enacted plastic bag bans with varying degrees of success. While Rwanda's strict ban and public education campaigns have been lauded for their effectiveness, challenges like poverty and enforcement complexities remain (UNEP, 2018; Michaela, 2017). Waste management is a pressing issue in many African nations due to increasing populations (Kple, 2015). Establishing effective waste management systems requires comprehensive policies based on practical solutions and thorough analysis of the problem (Kple, 2015). Additionally, exploring alternative solutions like the circular economy can contribute to sustainable waste management practices (Ezeudu & Ezeudu, 2019).

## **2.4 Evolution of Single-Use Plastic Use and Regulation in Local Contexts**

Environmental, economic, and cultural influences have shaped the history of single-use plastic use and regulation in Yaounde, Cameroon. The city's rich cultural diversity, with over 200 ethnic groups and various languages and customs, has added to the complexity of plastic waste management practices (Parrot et al., 2009). SuPs have surged since the 1950s, leading to environmental challenges such as plastic waste clogging drainage systems and water bodies (Wamba et al., 2023). The government has implemented regulations to address single-use plastics, including bans on non-biodegradable single-use plastic products.

However, the effectiveness of these policies has been hampered by regulatory challenges, lack of financial resources, and inadequate enforcement (Singh et al., 2023). Additionally, the absence of stakeholder involvement and public awareness about the ban has added to the challenges of managing single-use plastics in Yaounde (Singh et al., 2023). Despite these hurdles, efforts have been made to tackle plastic waste, such as establishing the country's plastic collection and recycling centers (Singh et al., 2023). The evolution of single-use plastic use and regulation in Yaounde underscores the need for comprehensive and coordinated efforts to effectively manage plastic waste, taking into account the city's cultural and environmental dynamics.

### **2.4.1 Cross-Cultural Influences and International Commitments in Single-Use Plastics Management**

Studying urban governance and local waste management practices reveal the roles of local decision-makers and the informal sector in addressing this challenge (Ndam et al., 2023; Niba & Abia, 2020). Despite government regulations, SuPs are deeply embedded in Yaounde's daily life due to cultural significance, perceived aesthetics, and cost-effectiveness (Ngambi, 2015). The anthropology of plastics emphasizes the need for anthropological analyses to understand the cultural significance and environmental concerns intertwined with SuP use,

making it relevant to Yaounde's context (Pathak & Nichter, 2019; Branch & Lynch, 2023). Overcoming the challenge of SuPs in Yaounde requires a multifaceted approach, including addressing economic and practical factors influencing SuP use, exploring sustainable alternatives, and fostering collaboration between stakeholders (Ndam et al., 2023).

#### **2.4.2 Analyzing Local Practices and Global Policies for Plastic Waste Reduction**

Yaounde, like many urban centers, struggles with plastic pollution. Informal waste collection, limited disposal options, and consumer habits fuel the problem (Tchoko, 2006). Globally, policies like the New Plastics Economy aim to reduce plastic use and increase recycling, but their reach in Cameroon is limited. Analyzing both local and global efforts is fundamental. Strengthening the informal sector by formalizing and training collectors can improve efficiency and material quality. Investing in infrastructure like sorting facilities is crucial for better management and recycling (Tchoko, 2006). Public awareness campaigns are essential to change behaviour and promote responsible consumption. Supporting local innovation for sustainable alternatives and recycling technologies can create jobs and address the waste issue.

Cameroon can also advocate for stricter global plastic production and trade regulations and increased financial and technical assistance for developing countries. Collaboration between stakeholders – communities, businesses, and government – is crucial for developing and implementing effective solutions that benefit the environment, society, and the economy. By learning from other African cities' successes and tailoring solutions to Yaounde's specific context, this multifaceted approach can pave the way for a cleaner, healthier future.

#### **2.5 Globalised Packaging and Local Interpretations**

Packaging goes beyond its practical function, argues Machiels (2019). He proposes "packaging culture" as the social and cultural context surrounding packaging, emphasizing its impact on daily life, rituals, and social interactions (Shove et al., 2007). This perspective challenges us to reconsider packaging design, sustainability, and social justice in a globalized world.

Packaging transcends its functional purpose, argues Machiels (2019). He introduces the concept of "packaging culture" - the social and cultural contexts surrounding packaging, highlighting its influence on everyday practices, rituals, and social interactions (Shove et al., 2007). This perspective necessitates a reevaluation of packaging design, sustainability, and social justice in a globalized world. While research on packaging's global development,



including Yaounde, is scarce, scholars like (Chaudhuri, et al., 2021) trace its historical evolution. Originally fulfilling rudimentary functions such as food preservation, packaging evolved into a symbol of worth and communication, encapsulating cultural ideals and delineating social status through the choice of materials and designs (Harris, 1973; Muthu, 2021).

Hine (1997) delves into the nuanced and sometimes underappreciated significance of packaging in our contemporary existence. He highlights its ubiquity and the multifaceted relationships people form with it, acknowledging both its potential for waste and its contributions to efficiency and convenience. While acknowledging environmental concerns, Hine emphasizes the importance of understanding packaging's multifaceted impact and the insights it offers into our values and desires.

Hine (1997) delves further, exploring the complex and often under-recognized significance of packaging in modern life. He emphasizes its pervasiveness and the multifaceted relationships people form with it, acknowledging both its potential wastefulness and its positive contributions to efficiency and convenience. While acknowledging environmental concerns, Hine emphasizes the importance of understanding packaging's multifaceted impact and the insights it offers into our values and desires.

### **2.5.1 Packaging Worldwide**

Packaging plays a crucial role in modern food systems, ensuring product safety and functionality (Macena et al., 2021). However, the dominance of single-use plastics raises concerns about environmental pollution (Macena et al., 2021). Striking a balance between functionality, design, and sustainability is vital. Packaging design significantly influences consumer choices, with visual elements playing a critical role in capturing attention and driving preference (Ploom et al., 2019). Chao (2010) emphasizes the importance of cultural sensitivity in design, highlighting the distinct design heritage of various cultures like China. He argues that designers need to understand these cultural nuances to effectively communicate and connect with diverse consumers.

Sustainable packaging traditionally focuses on the economic and environmental aspects, aiming for cost-effectiveness and minimizing environmental impact (Wever & Tempelman, 2009). However, Wever and Tempelman (2009) highlight the need to incorporate the social aspect, considering the broader societal implications of packaging choices. Research like Macena et al. (2021) investigates consumer attitudes towards packaging sustainability,

demonstrating the importance of understanding consumer preferences in addition to functionality and aesthetics.

Creating sustainable packaging solutions requires a multifaceted approach that considers various factors. This includes understanding consumer preferences and cultural sensitivities (Chao, 2010), minimizing environmental impact (Macena et al., 2021), and ensuring economic viability (Wever & Tempelman, 2009). By actively incorporating these aspects into the design process, we can strive towards developing packaging that satisfies our needs while minimizing negative social and environmental consequences.

## **2.5.2 Africa and Packaging Options**

The increasing need for packaged goods across Africa presents a multi-faceted challenge that requires innovative solutions. Balancing this demand with environmental considerations and respecting diverse cultural contexts creates a complex interplay that offers an opportunity to explore sustainable packaging options. This context encourages the development of packaging solutions that meet the growing demand for goods, address environmental concerns, and respect the unique cultural practices and preferences across the continent. It provides fertile ground for exploring and implementing sustainable packaging practices that can benefit both the environment and the diverse communities within Africa.

### **2.5.2.1 Plastic Reliance and Sustainability Concerns**

Owuor's (2018) study highlights the challenges faced by the One Village One Product (OVOP) initiative due to inadequate packaging, reflecting a broader issue across Africa where businesses lack access to quality packaging solutions. Despite South Africa's strong export profile in plastics (40%) and paper (26%), it faces similar disparities, with imports exceeding exports for glass, metal, and wood used in wine production. Embrandiri (2021) highlights the widespread use of SuPs in Africa, particularly in packaging, which poses a significant environmental risk. Meziani's (2015) study on olive oil packaging in Algeria demonstrates the need for context-specific and sustainable solutions, while Benslimane (2014) emphasizes the multi-faceted roles of packaging. South Africa's export strengths and import dependencies offer opportunities for local innovation and resource optimization, with collaboration between policy-makers, the private sector, and communities crucial for implementing sustainable solutions and fostering equitable access.

### **2.5.2.2 Challenges and Opportunities**

Africa's rapid urbanisation and economic growth drive a surge in the demand for packaged goods, presenting a dual landscape of challenges and opportunities (African Packaging Organisation, 2023). While traditional packaging materials such as woven baskets and banana leaves are sustainable, they need help meeting large-scale production requirements and maintaining hygiene standards (Akpan & Ekanem, 2020). This gap in meeting demand creates an opening for plastic alternatives, but their increased usage raises valid concerns about plastic pollution and the limitations of waste management infrastructure (UNEP, 2021). As Africa navigates this dynamic environment, there is a pressing need to balance the advantages of modern packaging solutions with the imperative to address environmental and sustainability challenges.

### **2.5.2.3 Innovation and Local Knowledge**

Despite the challenges posed by the demand for sustainable packaging in Africa, innovation has emerged. As Kouassi and Kouadio (2022) highlight, biodegradable alternatives such as cassava-based plastics and edible coatings present promising solutions to address environmental concerns. Furthermore, the integration of local knowledge and materials, such as bamboo, as suggested by Ntiamoah et al. (2023), holds significant potential for the development of culturally relevant and environmentally friendly packaging options. These innovative approaches offer solutions to the current packaging challenges and demonstrate the capacity to align with local contexts and contribute to sustainable practices within the African packaging industry.

### **2.5.2.4 Cultural Considerations**

Successful implementation of sustainable packaging solutions in Africa requires careful consideration of cultural contexts. Research by Ayivor et al. (2021) emphasises the significance of comprehending consumer preferences and adjusting packaging designs to align with these preferences. Additionally, traditional packaging methods often carry deep cultural significance, making it essential to engage in collaborative efforts with local communities to both preserve the cultural value of these methods and develop sustainable alternatives, as noted by DeLancey (2012). By acknowledging and incorporating cultural perspectives into the development and implementation of sustainable packaging, it becomes possible to create solutions that meet environmental objectives and resonate with and respect the diverse cultural heritage of the communities they serve.

### **2.5.2.5 Policy and Collaboration**

The involvement of governments is pivotal in driving the adoption of sustainable packaging practices through the implementation of regulations and the promotion of waste management infrastructure, as Nnorom and Odu (2018) emphasised. This regulatory framework provides incentives and guidelines for businesses and communities to embrace sustainable packaging solutions.

Furthermore, effective collaboration among policy-makers, the private sector, and local communities is essential for successfully implementing sustainable packaging practices and ensuring equitable access to these solutions, as highlighted by UNEP (2021). Through collaboration, stakeholders can combine their knowledge and resources to establish an enabling environment for the extensive implementation of sustainable packaging. This cooperative approach promotes a more environmentally responsible and inclusive strategy for packaging practices.

## **2.6 Cultural Norms, Traditions, and Values**

Cultural studies offer a unique perspective on environmental issues like plastic pollution. While traditionally focused on human experiences, scholars like Oswell (2006) argue for extending cultural analysis to the environment, including "plastics." Alongside this approach, Pandian (2019) emphasizes anthropology's role in exposing hidden elements within environmental problems.

This focus on culture reveals the "throwaway culture" as a significant contributor to plastic pollution (McDermott, 2016). Single-use plastics (SuPs) exemplify this culture, leading scholars to examine their "social life" and impact on human health and ecosystems (Pathak & Nichter, 2019). The detrimental effects of SuPs on marine life and the human food chain further highlight the need for behavioural change (McDermott, 2016). Studies suggest responsible waste management, like recycling and reuse, as potential solutions. Ultimately, transforming our throwaway culture by reconnecting with nature and appreciating the earth's resources is crucial to ending SuP use (McDermott, 2016).

The research about cultural norms, traditions, and values in Yaounde regarding managing single-use plastics sheds light on how cultural practices intersect with policy implementation. This discussion focuses on whether the cultural practices related to single-use plastics align with existing policies. Scholars examine Yaounde's cultural norms, traditions, and

values to understand how they impact attitudes and behaviours towards plastic use and disposal. By studying this complex relationship, researchers seek to determine if cultural practices help or hinder the effectiveness of policies that manage SuPs (Choi, 2016). This review provides a detailed understanding of how cultural factors influence plastic waste management strategies in Yaounde, which can guide the development of more culturally sensitive and contextually appropriate policy interventions.

### **2.6.1 Influence on Plastic Management**

Understanding the influence of cultural norms, traditions, and values on single-use plastic management in Yaounde, Cameroon unveils a complex and fascinating narrative (Nguendo-Epanya et al., 2020). Rituals and ceremonies often integrate single-use plastics, imbuing them with symbolic meaning within specific cultural practices (Nyamnjoh, 2011). Sharing and gifting, deeply embedded in Yaounde's social fabric, can involve plastic-wrapped items, highlighting the interplay between cultural norms and plastic consumption (Njiforti et al., 2018). Generational differences also come into play, with younger generations potentially exhibiting more environmentally conscious attitudes towards plastic use than their elders (Ngouo et al., 2023). Examining these cultural nuances is crucial for crafting effective interventions, as policies that clash with deeply held values often face resistance and limited adoption (Le Billon et al., 2022).

#### **2.6.1.1 Plastics in Rituals and Ceremonies**

In the busy city of Yaounde, SuPs are becoming a growing threat to the city's rich cultural heritage. Even though there are policies and campaigns promoting sustainability, their success relies on understanding the complex relationship between SuPs and cultural practices. This review examines how single-use plastics have become a part of Yaounde's cherished rituals and ceremonies, highlighting their cultural significance and the challenges they pose for sustainable waste management.

The use of single-use plastics in Yaounde carries both practical advantages and symbolic significance, as highlighted by Njiforti et al. (2018) and Nyamnjoh (2011). While these plastics offer convenience and affordability, they also hold symbolic meanings in ceremonies and rituals, representing modernity, prosperity, and respect for the deceased. However, this integration of plastics conflicts with environmental concerns and traditional values, creating ethical dilemmas, as emphasised by Le Billon and Kajisa (2022). Navigating this challenge requires a nuanced approach, as simply banning single-use plastics may clash with deeply held cultural values. Instead, community-based interventions that integrate

traditional waste management practices with sustainable alternatives, as proposed by Njiforti et al. (2018), and engaging young people in designing culturally appropriate solutions, as suggested by Ngouo et al. (2023), are crucial. Understanding these complex cultural meanings and fostering dialogue between stakeholders is essential for crafting sustainable solutions that honour tradition while safeguarding the environment, allowing Yaounde's vibrant rituals to shine free from the shadows of plastic waste.

### **2.6.1.2 Sharing and Gifting Practices**

Single-use plastics are becoming increasingly entrenched in daily life, not just in Western societies but also in developing countries like Cameroon. In Yaounde, cultural norms around sharing and gifting practices weave a complex narrative with these disposable materials, raising crucial questions about their impact on plastic consumption and waste management. This literature review delves into how cultural norms in Yaounde shape the use of single-use plastics in gift-giving and community interactions, drawing upon insights from various scholarly sources.

Single-use plastics in gift-giving in Yaounde reflect deeply embedded cultural practices and social aspirations. While these plastics offer convenience and perceived modernity, they pose environmental challenges. Sustainable solutions must navigate this complex interplay, emphasising collaboration and culturally sensitive approaches that respect traditions while promoting responsible waste management practices. This involves considering local contexts, exploring biodegradable packaging options, and promoting the reuse of traditional wrapping materials (Njiforti et al., 2018; Le Billion et al., 2022; Nguendo-Epanya et al., 2020; Nyamnjoh, 2011; Ngouo et al., 2023).

### **2.6.1.3 Generational Differences**

The landscape of single-use plastic management in Yaounde, Cameroon, is not monolithic. As generations shift and evolve, so do their attitudes and behaviours towards this pervasive material. This literature review delves into the fascinating world of generational differences in Yaounde, exploring how cultural influences shape their perspectives on plastic use and waste management.

Generational differences in attitudes towards plastic use in Yaounde reflect a complex interplay of cultural influences. Older generations exhibit resourcefulness and mindfulness in plastic use, rooted in traditional practices and limited resources (Nguendo-Epanya et al., 2020). They emphasise minimising waste and respecting the environment (Njiforti et al., 2018). In

contrast, younger generations, influenced by global sustainability discourse, demonstrate heightened environmental awareness and a desire for change (Ngouo et al., 2023).

However, these attitudes are only sometimes clear-cut as cultural values and traditions evolve (Nyamnjoh, 2011). Bridging generational differences requires a nuanced approach that respects traditional wisdom while incorporating the aspirations of younger generations. Collaborative, community-based solutions that engage all age groups are advocated for by Le Billon and Kajisa (2022). This approach leverages the practical knowledge of elders and the technological savviness of younger individuals, fostering shared responsibility for sustainable waste management (Ngouo et al., 2023). Recognising and leveraging these diverse perspectives is crucial for designing effective strategies to tackle plastic pollution. By bridging the gap between generations, fostering collaboration, and leveraging their unique strengths, Yaounde can pave the way for a more sustainable future, honouring its traditions while embracing the aspirations of its youth.

## **2.6.2 Shaping Plastic Consumption and Disposal**

Single-use plastics are a complex challenge for developing nations like Cameroon due to their widespread use and long-lasting nature. To address this issue, it's essential to understand how cultural roots, preserved traditions, and cherished values influence people's relationship with plastic. This literature review explores this intricate landscape, drawing on the insights of various scholars to shed light on the challenges we face and the promising opportunities that lie ahead. By doing so, we can gain a deeper understanding of the cultural factors that contribute to plastic use and identify potential solutions to address this issue in Cameroon and beyond.

### **2.6.2.1 Convenience Takes Root: Affordability and Pragmatism**

Njiforti et al. (2018) highlight the affordability and practicality of single-use plastics as a critical driver of their widespread adoption in Yaounde. Cheap and readily available, plastic bags become convenient packaging for market purchases. At the same time, bottled water offers a perceived guarantee of cleanliness in a context with limited access to safe drinking water. Le Billon and Kajisa (2022) further emphasise the cultural value of convenience in modern societies, leading many to prioritise speed and ease over more sustainable alternatives.

Yaounde's plastic consumption and disposal narrative is deeply rooted in cultural values and traditions, extending beyond mere practicality (Nyamnjoh, 2011; Nguendo-Epanya et al.,

2020). This creates a tension between upholding tradition and pursuing environmental sustainability, leading to ethical dilemmas (Ngouo et al., 2023; Le et al., 2022).

Navigating this complexity requires a culturally sensitive approach. Scholars suggest community-based solutions involving local artisans and citizen participation in designing and implementing sustainable alternatives (Njiforti et al., 2018; Nguendo-Epanya et al., 2020). Additionally, culturally tailored education and awareness campaigns are crucial. Furthermore, collaboration between policymakers, communities, and researchers is key to fostering participatory action research and "untangling the plastic knot" (Moser, 1994). This collaborative effort, respecting local traditions while promoting environmental responsibility, can pave the way for a more sustainable future for Yaounde and similar communities.

### **2.6.2.2 Aesthetics and Materiality**

Single-use plastics have become ubiquitous in Yaounde, Cameroon, but their appeal goes beyond mere practicality. Cultural factors deeply influence preferences for specific types of packaging, weaving a complex narrative around aesthetics and materiality. This literature review delves into these cultural influences, exploring how they shape plastic consumption and disposal in Yaounde, Cameroon.

The allure of modernity and prosperity associated with single-use plastics, as highlighted by Njiforti et al. (2018), and the aesthetic appeal and cultural significance of these materials, emphasised by Le Billon and Kajisa (2022), contribute to their preference over traditional alternatives. Ngouo et al. (2023) point out the importance of materiality in shaping plastic preferences, while Nguendo-Epanya et al. (2020) emphasise the cultural significance of plastic in gift-giving practices. Crafting effective solutions to plastic waste management requires culturally sensitive approaches, as cautioned by Le Billon and Kajisa (2022) and advocated by Njiforti et al. (2018). Understanding the cultural dimensions of aesthetics and materiality in Yaounde's plastic preferences is vital for tackling the single-use plastic challenge, ensuring that solutions respect cultural values while promoting sustainability.

### **2.6.2.3 Waste Disposal Rituals and Taboos**

Single-use plastics have been woven into everyday life fabric in Yaounde, Cameroon. Nevertheless, beyond their visible presence lies a complex world of cultural beliefs and practices surrounding their disposal. This literature review delves into the often-hidden realm of waste disposal rituals and taboos, exploring how they shape plastic management and present potential barriers to sustainable solutions.



The cultural significance of waste disposal in Yaounde is deeply rooted in animistic beliefs and symbolic meanings, as highlighted by Njiforti et al. (2018) and Le Billon and Kajisa (2022). These beliefs influence specific disposal practices for plastics but can also create barriers to sustainable disposal, as noted by Nguendo-Epanya et al. (2020) and Ngouo et al. (2023). Recognising the influence of waste disposal rituals and taboos is crucial for developing practical solutions to plastic pollution, as advocated by Le Billon and Kajisa (2022) and Njiforti et al. (2018). By fostering collaboration, building knowledge, and respecting cultural values, we can navigate the invisible world of waste disposal and pave the way for a cleaner future for Yaounde.

### **2.6.3. Conflicts and Synergies with Environmental Concerns**

Single-use plastics pose a multi-faceted challenge in developing nations like Cameroon, particularly in Yaounde, where cultural norms and values significantly influence their use and disposal. Njiforti et al. (2018) highlight the practicality and affordability of single-use plastics, driven by their widespread adoption in market purchases and as bottled water due to limited access to safe drinking water. Le Billon and Kajisa (2022) emphasise the cultural value of convenience, prioritising speed and ease over sustainability. Nyamnjoh (2011) and Nguendo-Epanya et al. (2020) underscore plastics' symbolic and spiritual significance in gift-giving and ceremonies, emphasising the need for solutions that address their deeper embedded meanings within traditions and social norms.

Ngouo et al. (2023) highlight the growing environmental consciousness among younger generations, leading to a conflict between tradition and sustainability. Bridging this gap requires community-based approaches, as suggested by Njiforti et al. (2018), and the importance of education and awareness campaigns tailored to specific cultural contexts, as emphasised by Nguendo-Epanya et al. (2020). Recognising these cultural nuances and fostering collaboration between policy-makers, communities, and researchers is essential for creating solutions that respect traditions while safeguarding the environment for future generations. Only then can a more sustainable future be woven for Yaounde and other communities facing similar challenges.

#### **2.6.3.1 Traditional Waste Management Systems**

Single-use plastics have become ubiquitous in Yaounde, Cameroon, posing a significant environmental challenge. However, amidst modern solutions, the wisdom of traditional waste management systems holds valuable insights. This literature review explores existing practices,

their potential integration with modern approaches, and the conflicts and synergies arising when addressing single-use plastic management.

The traditional waste management practices in Yaounde, as highlighted by Njiforti et al. (2018) and Nguendo-Epanya et al. (2020), demonstrate resourcefulness, respect for resources, and the presence of informal recycling systems. However, integrating these practices with modern approaches faces challenges, as Le Billon and Kajisa (2022) and Nyamnjoh (2011) noted. Conflicts can arise between traditional beliefs and modern waste management strategies. Despite these challenges, there are opportunities for synergistic solutions, such as the potential for modern technologies like biodegradable plastics to complement traditional composting practices, as emphasised by Ngouo et al. (2023). Revitalising informal recycling systems and fostering collaboration between communities, policy-makers, and researchers, as advocated by Njiforti et al. (2018) and Nguendo-Epanya et al. (2020), are crucial for developing culturally sensitive and context-specific solutions. In summary, the resourcefulness and community-based approach embedded in traditional waste management practices offer valuable lessons for navigating a sustainable future for Yaounde's waste management.

### **2.6.3.2 Sustainability and Modernity**

The literature review explores the complex relationship between cultural norms, environmental consciousness, and the management of single-use plastics in Yaounde, Cameroon. It highlights the symbolic and practical value of plastics associated with modernity and convenience and the rise in environmental consciousness leading to a potential conflict between plastic convenience and environmental well-being. The review also emphasises the potential for cultural adaptation and innovation in addressing the plastic challenge, including community-based solutions, upcycling workshops, and the integration of new technologies into traditional practices (Njiforti et al., 2018; Le Billon and Kajisa, 2022; Ngouo et al., 2023; Nguendo-Epanya et al., 2020; Nyamnjoh, 2011). Recognising these nuances and fostering collaboration is crucial for crafting solutions that respect cultural values while safeguarding the environment.

## **2.7 Stakeholder Approaches to Waste Management in Yaounde**

The bustling city of Yaounde, Cameroon, faces a growing challenge: single-use plastic waste. This pervasive issue demands a multi-faceted approach, requiring the collaboration of diverse stakeholders to develop effective and sustainable solutions. This literature review explores the strategies and challenges faced by various stakeholders in Yaounde's single-use plastic waste management landscape.

### **2.7.1 The Government**

The Cameroonian government has taken steps to address plastic waste through policy interventions. The 2014 ban on the production, importation, and distribution of plastic bags met with initial resistance (Nguendo-Epanya et al., 2020), has spurred the exploration of alternative materials (Njiforti et al., 2018). However, challenges remain in enforcing the ban and providing affordable alternatives for low-income communities (Le Billon & Kajisa, 2022). Continued efforts are needed to improve enforcement, invest in waste collection infrastructure, and promote public awareness campaigns.

### **2.7.2 NGOs and Civil Society**

Local NGOs like "Green Development Association" and "Centre for Environment and Development" play a crucial role in raising awareness and implementing community-based initiatives (Nguendo-Epanya et al., 2020). Their activities include beach cleanups, educational workshops, and promoting composting methods. However, limited funding and dependence on external support can hinder their long-term impact and sustainability (Ngouo et al., 2023). Collaboration with other stakeholders and exploring innovative funding models are crucial for their effectiveness.

### **2.7.3 The Private Sector**

Manufacturers and retailers increasingly recognise the environmental and economic costs of single-use plastics. Companies like "Cameroon Bottling Company" have adopted refillable glass bottles, demonstrating the potential for industry-driven solutions (Le Billon & Kajisa, 2022). However, challenges remain in ensuring extended producer responsibility schemes are implemented effectively and that the affordability of sustainable alternatives is addressed. Collaboration with government and NGOs can foster innovation and ensure responsible practices throughout the supply chain.

### **2.7.4 Communities and Individuals**

The success of any waste management strategy ultimately hinges on the participation of communities and individuals. Research suggests Yaounde residents are adapting their consumption habits, adopting reusable bags and exploring alternatives like banana leaf packaging (Njiforti et al., 2018). However, cultural perceptions and access to affordable alternatives play a significant role (Kerli et al., 2019; Ngouo et al., 2023). Community-based education, promoting local innovation, and ensuring access to waste collection services are essential for fostering sustainable behaviour change.

Addressing single-use plastic waste in Yaounde requires a collaborative approach that leverages the strengths and addresses the challenges diverse stakeholders face. Effective solutions must consider cultural contexts, economic realities, and technological advancements. By working together, stakeholders can build a more sustainable future for Yaounde that is free from plastic pollution.

## **2.8 The Impact of Single-Use Plastics on Traditional Cultural Practices and Environmental Sustainability in Yaounde**

The proliferation of single-use plastics in Yaounde presents a complex challenge at the intersection of culture, environment, and livelihood sustainability. This proposed research offers a fertile ground for exploring the multi-faceted impact of SuPs on the city's traditional practices and environmental well-being. By delving into existing literature, we can navigate the arguments surrounding the role of SuPs in Yaounde's dynamic context.

### **2.8.1 Traditional Practices at Crossroads**

Studies highlight the pervasive presence of SuPs in Yaounde's vibrant markets, impacting practices deeply rooted in cultural identity. Some authors, like Akpan and Ekanem (2020), suggest that SuPs replace traditional materials like woven baskets and banana leaves in food packaging, potentially leading to the erosion of cultural heritage and knowledge associated with sustainable alternatives. Conversely, others, like Ndam and Ngwa (2023), argue that SuPs offer convenience and perceived hygiene benefits, facilitating food trade and income generation for local vendors. This nuanced perspective underscores the need to understand the cultural significance of traditional practices and the perceived advantages of SuPs.

### **2.8.2 Environmental Footprint and Sustainability Concerns**

The environmental consequences of SuPs in Yaounde are undeniable. Research by Tchatchouang et al. (2022) paints a stark picture of plastic pollution clogging waterways, degrading ecosystems, and posing health risks. Such findings resonate with global concerns about plastic waste, highlighting the unsustainable nature of SuPs. However, authors like Ayonghe et al. (2021) acknowledge some communities' economic dependence on the recycling and reuse of SuPs, raising questions about potential livelihood disruptions arising from stricter regulations. This highlights the need for inclusive solutions addressing environmental and economic concerns.

The concept of a circular economy aims to establish a closed loop for items like beverage containers and consumer packaging, where discarded components are collected and

reconstructed into new items (Nunez, 2021). However, the practical implementation of this strategy and its effectiveness in combating environmental degradation still need to be determined. Proponents argue that a circular economy considers all stages of a product's journey, offering economic, social, and environmental benefits (Voet et al., 2021). Single-use plastics, particularly plastic bags, exemplify the linear mode of production and consumption, leading to post-consumer mismanagement issues (Bahri, 2005). Some advocate recycling as a strategy to add value to post-use plastics, diverting them from the environment and reducing the carbon footprint of the value chain (Romer, 2021). Mechanical recycling, which accounts for over 96% of plastic package recycling, is expected to proliferate but may not fully meet the demand for recycled materials (Brown, 2022).

### **2.8.3 Seeking Balance and Sustainable Futures**

Navigating the impact of SuPs on Yaounde necessitates a comprehensive understanding of the cultural, environmental, and economic considerations at play. Authors like Ambe (2019) emphasise engaging with diverse stakeholders, including local communities, cultural leaders, and policy-makers, to co-create solutions that respect cultural values, protect the environment, and ensure sustainable livelihoods. Such collaborative approaches, as advocated by Ngonu et al. (2022), offer promising avenues for developing context-specific plastic management strategies that integrate cultural knowledge and empower communities to become active participants in transitioning away from SuP dependence.

Analyzing the viewpoints put forth by these diverse authors enables us to understand the complex network created by SuPs in Yaounde. Their impact transcends convenience, influencing cultural practices, environmental health, and economic realities. As we delve deeper into this research, we must embrace the complexity of this issue and strive for critical thinking, fostering solutions that acknowledge diverse perspectives and pave the way for a more sustainable future for Yaounde's cultural treasures and environment.

## **2.9 Cultural Adaptations and Alternatives**

The growing awareness of plastic pollution has sparked global efforts to curb its use, often leading to bans on specific items. While such regulations are crucial, understanding and adapting to diverse cultural contexts is essential for ensuring their effectiveness and fostering sustainable solutions. Here, we explore how communities are adapting and innovating in response to plastic prohibitions:

### **2.9.1 Documenting Cultural Adaptations**

In our study, we explore the complex domain of documenting how different communities adapt culturally to manage plastic waste. By meticulously capturing how cultural practices intersect with single-use plastics' use, reuse, and disposal, we aim to unravel the complex web of social, economic, and environmental factors that shape individuals' and communities' relationships with plastic. Through this ethnographic exploration, we seek to shed light on the cultural nuances that influence the success or limitations of plastic waste management strategies, ultimately paving the way for more culturally sensitive and effective interventions.

#### **2.8.1.1 Shifting Consumption Patterns**

In the streets of Yaounde, a captivating story unfolds – one woven with convenience, tradition, and environmental awareness. Research suggests a fascinating shift in consumption patterns regarding SuPs, driven by cultural values and global pressures. Imagine the vibrant markets once overflowing with plastic bags, now echoing with the rustle of woven baskets and cloth totes, a subtle yet powerful return to traditional practices (Njiforti et al., 2018). However, this shift is not solely driven by nostalgia. The growing awareness of plastic pollution's impact, particularly on the livelihoods of fishers and farmers, has sparked a collective desire for change (Nguendo-Epanya et al., 2020).

However, this environmental consciousness must navigate the symbolic significance of certain plastics. For instance, the convenience and modernity associated with water sachets initially posed a challenge to bans, highlighting the need for culturally sensitive alternatives (Le Billon & Kajisa, 2022). This evolving landscape presents both challenges and opportunities. Understanding these shifting consumption patterns, their cultural underpinnings, and the communities' agency in navigating them is crucial for crafting sustainable solutions that resonate with the very fabric of Yaounde's cultural identity.

#### **2.8.1.2 Symbolic Reinterpretations**

In a busy market in Yaounde, there is more than just the vibrant colours and smells. SuPs, once seen as convenient and modern, are going through a cultural change. Research shows that banning plastics is important but does not address all the issues (Njiforti et al., 2018). In Yaounde, communities are not just throwing away plastic but are changing its meaning and

making it a part of the city's culture as communities in Yaounde are repurposing single-use plastics in creative ways, such as using them to make art, crafts, and functional items like baskets and containers (Njiforti et al., 2018). They are also exploring alternative materials for packaging and storage, drawing on traditional practices and local resources. By doing so, they are transforming the cultural significance of single-use plastics and reducing their environmental impact.

Consider the plastic water sachet, once a ubiquitous symbol of refreshment. Its initial ban met resistance, as it held connotations of accessibility and even status (Le Billon & Kajisa, 2022). However, inhabitants of Yaounde adjusted to the situation by welcoming reusable metal bottles adorned with elaborate designs, turning them into individualized manifestations of functionality and cultural belonging. This shift highlights the dynamic interplay between policy, individual agency, and cultural values (Kajisa, 2022).

Similarly, once relegated to rural areas, the traditional woven basket is returning to Yaounde's markets (Njiforti et al., 2018). This revival is not just about practicality; it is a conscious choice, imbuing everyday acts with cultural significance. As community members choose these baskets, they connect with their heritage, weaving a thread of tradition into the modern cityscape.

These symbolic reinterpretations reveal the remarkable adaptability of Yaounde's communities. They remind us that sustainable solutions go beyond mere material substitutions; they necessitate understanding the deeper cultural narratives embedded within everyday objects. By acknowledging these symbolic shifts, we can design interventions that resonate with local values, fostering compliance and a genuine embrace of a more sustainable future for Yaounde.

### **2.8.1.3 Adapting Traditional Practices**

In Cameroon, communities harness existing knowledge and practices to enhance waste management. They are integrating traditional composting methods with modern recycling initiatives, showcasing a fusion of cultural heritage and innovative solutions (Ngouo et al., 2023). This approach addresses environmental concerns and preserves and celebrates traditional practices within the community.

### **2.9.2 Embracing Alternative Materials**

Yaounde, embracing alternative materials, is reshaping the landscape of single-use plastics management. From the revival of traditional woven baskets and cloth bags to the

innovative use of upcycled materials, communities are committed to reducing reliance on single-use plastics. This shift addresses environmental concerns and reflects a revival of cultural practices, fostering a sense of pride and sustainability within the city.

### **2.8.2.1 Reusable options**

In Yaounde, the rich diversity of culture blends with the increasing presence of SuPs, posing both obstacles and possibilities for eco-friendly waste disposal. Regulations target environmental protection by encouraging circular economy by promoting the production of reusable plastics, but acknowledging cultural nuances is essential for the successful acceptance of reusable products. The study conducted by Njiforti et al., (2018) emphasizes the resurgence of classic handwoven baskets and fabric bags, showcasing a smooth blending of cultural legacy and eco-friendliness. Picture dynamic markets filled with vendors displaying vibrant fabrics for reusable bags, resonating with the vibrant energy of the city.

Moreover, there are obstacles that need to be overcome. Le Billon and Kajisa (2022) highlight the importance of acknowledging the symbolic significance of specific plastics, such as their link to modernity or convenience. Might reusable options gain comparable cultural importance by partnering with local artisans for design collaborations? Ngouo and colleagues (2023) propose investigating the possibility of repurposing materials and converting plastic waste into distinctive and culturally significant items that can be used again. Through promoting conversations among different groups, policymakers, and artists, Yaounde can successfully transition from using plastic to reusable materials, creating a future where the city's cultural identity is enriched by its commitment to environmental sustainability.

### **2.8.2.2 Biodegradable Alternatives**

Communities are actively exploring biodegradable alternatives such as cassava starch bags and banana leaf packaging as potential solutions to mitigate plastic pollution. While there are concerns about their large-scale viability, these initiatives represent a promising step towards addressing environmental challenges. Using cassava starch and banana leaf as packaging materials demonstrates a commitment to sustainability and highlights the potential for innovative, nature-based solutions to reduce the impact of plastic waste on the environment (Nguendo-Epanya et al., 2020). This nascent yet hopeful approach signifies a growing awareness of the need for eco-friendly alternatives and a willingness to embrace new, biodegradable materials to fight against plastic pollution.

### **2.8.2.3 Local Innovations**



In Yaounde, creativity thrives amidst the challenges of managing SuPs. Communities actively develop solutions that fit their cultural context, rather than just following imposed regulations. Imagine bustling marketplaces decorated with colourful woven baskets instead of plastic bags, each intricate pattern showcasing generations of skilled craftsmanship (Njiforti et al., 2018). Imagine young, innovative individuals transforming plastic waste into unique art pieces, breathing new life into discarded materials and initiating conversations about the significance of sustainability (Ngouo et al., 2023). These examples are not just isolated stories; they represent a growing movement of cultural adaptation and resourcefulness. In simple terms, the people of Yaounde are finding innovative ways to tackle plastic waste by incorporating their cultural practices and traditions. They use woven baskets instead of plastic bags and create art from plastic waste, promoting sustainability while preserving their cultural heritage.

From integrating traditional composting methods with modern recycling initiatives to utilising readily available materials like banana fibres for crafting reusable bags, Yaounde's communities demonstrate that sustainability can be woven into the fabric of daily life (Nguendo-Epanya et al., 2020). As we delve deeper into "culture and single-use plastics management in Yaounde," these local innovations offer practical solutions and a glimpse into the resilience and creativity that define this vibrant city.

### **2.9.3 Highlighting Innovative Practices**

In Yaounde, there are many innovative community-led initiatives that are helping to reduce SuPs pollution. For example, in some markets, traditional woven baskets are being used instead of plastic bags. There are also workshops that teach people how to compost and recycle in a modern way. These initiatives not only help with waste management but also empower communities and create a sense of pride in their culture. By supporting these grassroots efforts, we can contribute to a more sustainable future for Yaounde that is built on community spirit, cultural sensitivity, and environmental responsibility (Nguendo-Epanya et al., 2020).

#### **2.8.3.1 Community-Led Initiatives**

Yaounde faces a challenge with single-use plastic pollution, which is intertwined with its cultural fabric. Top-down solutions often overlook cultural nuances, leading to resistance and limited impact. Community-led initiatives, such as awareness campaigns and knowledge-sharing workshops, empower residents to become active change agents. These initiatives foster a sense of ownership, innovation, and cultural pride, and contribute to sustainable waste management. By acknowledging and backing these community-led initiatives, we can

contribute to a more sustainable future for Yaounde, one that is founded on community spirit, cultural sensitivity, and environmental responsibility (Njiforti et al., 2018).

### **2.8.3.2 Social Enterprises**

The vibrant culture, social enterprises are emerging as powerful forces in managing SuPs. Passionate individuals like Aïcha, who witnessed the plastic tide engulfing her community, are driving these ventures as social changemakers (Nguendo-Epanya et al., 2020). Aïcha's initiative, "Clean Yaounde," empowers women like Marie, a single mother, to collect and upcycle plastic waste into sustainable products, creating economic opportunities and fostering environmental consciousness and cultural pride (Njiforti et al., 2018). These ventures tap into Yaounde's rich tradition of resourcefulness, transforming waste into cultural artefacts, each with a unique story of transformation. They exemplify the power of collective action and the resilient and innovative spirit of Yaounde's people, even amidst the plastic deluge.

### **2.8.3.3 Cultural Integration**

To effectively manage single-use plastic in Yaounde, it is essential to consider the city's cultural fabric. Markets with woven baskets replacing plastic bags and community elders advocating for waste management using ancestral wisdom are examples of how culture can shape sustainable solutions. Studies by Njiforti et al. (2018) and Nguendo-Epanya et al. (2020) emphasize the importance of integrating traditional waste management practices and understanding cultural nuances. By documenting cultural adaptations, embracing alternative materials, and highlighting innovative practices, we can design interventions that resonate with Yaounde's cultural identity and foster a future where environmental responsibility and cultural identity thrive in harmony. Acknowledging diverse contexts and cultural nuances is crucial to developing effective and sustainable solutions that resonate with communities and contribute to a cleaner future.

## **2.10 Theoretical Framework**

We usually mean a grand theory, also known as a theoretical framework or a broad way of looking at the world from a theoretical perspective. In anthropology, we sometimes refer to it as a cosmology if it is attributed to "traditional culture" or a paradigm attributed to "Western scientists" (Barnard, 2004). Identifying world views that can be used to analyse and interpret this work is necessary. There are several perspectives on this issue, but we will consolidate our viewpoint with aspects or contributions from various world views namely: Globalization theory, Cultural Ecology and Interpretive Anthropology.

### **2.10.1 Globalization Theory**

This theoretical framework employs Globalization Theory to examine the diffusion and cultural integration of single-use plastics in Yaounde, Cameroon. By focusing on specific aspects of this theory, we can understand how single-use plastics, a product of global manufacturing and consumption trends, have become embedded in the social life of Yaounde city dwellers.

Globalization Theory explores the interconnectedness of the world through the flow of goods, information, technology, and cultural practices across borders (Giddens, 1990; Appadurai, 1996). It highlights the dynamic interactions between global and local processes, often referred to as "glocalization" (Robertson, 1995). This theory posits that global influences interact with local practices in complex ways, creating new cultural forms and practices.

#### **2.10.1.1 Global Production and Consumption Patterns**

Global production and consumption patterns, central to globalization theory, illustrate the interconnectedness of economies and cultures worldwide. These patterns reflect the manufacturing and consumption practices that transcend national boundaries, driven by multinational corporations and global trade networks. According to Giddens (1990), global production patterns involve the outsourcing of manufacturing processes to countries with lower labour costs, leading to the proliferation of mass-produced goods on a global scale. Similarly, Appadurai (1996) argues that global consumption patterns are characterized by the homogenization of consumer preferences and the spread of Western consumer culture through media and advertising.

In the context of single-use plastics in Yaounde, Cameroon, global production and consumption patterns have played a significant role in their proliferation. The availability of cheaply produced plastic goods, manufactured through global supply chains, has fueled their widespread adoption in Yaounde and other urban centers. These patterns reflect the influence of global economic forces on local markets, shaping consumption behaviours and environmental practices (Giddens, 1990; Appadurai, 1996). As such, understanding the dynamics of global production and consumption is essential for comprehending the cultural and environmental implications of single-use plastics in Yaoundé.

#### **2.10.1.2 Cultural Integration and Adaptation**

Cultural integration and adaptation, a fundamental aspect of globalization theory, elucidate how global influences interact with local cultures, resulting in the emergence of hybrid

cultural forms. This process involves the incorporation of external cultural elements into existing local practices and the adaptation of these elements to fit the local context. According to Robertson (1995), cultural integration occurs as individuals and communities engage with global flows of ideas, values, and practices, incorporating them into their daily lives. This integration often leads to the formation of new cultural identities that are neither purely global nor purely local but represent a blend of both.

In the context of single-use plastics in Yaounde, Cameroon, cultural integration and adaptation are evident in the widespread adoption of plastic bags by street vendors and retailers. Despite the government's efforts to regulate plastic usage, the convenience and practicality of plastic packaging have led to its pervasive use, reflecting the influence of global consumption patterns on local practices (Robertson, 1995). This phenomenon underscores the dynamic interplay between global forces and local cultures, shaping the cultural landscape of Yaounde.

### **2.10.1.3 Economic Realities**

Economic realities, a key component of globalization theory, encompass the structural dynamics and inequalities inherent in the global economy. These realities shape the distribution of wealth, resources, and opportunities on a global scale, influencing the economic conditions and livelihoods of individuals and communities. According to Robertson (1995), economic globalization involves the increasing interconnectedness of national economies through trade, investment, and financial flows, resulting in both opportunities and challenges for different socio-economic groups.

In the context of Yaounde, Cameroon, economic realities play a crucial role in shaping the use and management of SuPs. The city's informal economy, which comprises a significant portion of economic activity, relies heavily on plastic packaging due to its affordability and availability. Street vendors and small-scale retailers, operating within this informal sector, depend on plastic bags for packaging and transporting goods, reflecting the economic constraints and realities they face (Robertson, 1995).

Moreover, the influence of global economic forces, such as trade policies and market demands, impacts the availability and pricing of SuPs in Yaounde, further underscoring the intertwined relationship between economic realities and environmental practices. Understanding these economic dynamics is essential for devising effective strategies to address the challenges of plastic waste management in Yaoundé while considering the socio-economic contexts in which they operate.

Globalization Theory provides a comprehensive lens for examining the diffusion and integration of single-use plastics in Yaounde. This theory will elucidate the interactions between global forces and local cultural practices, contributing to the development of sustainable and culturally appropriate waste management solutions. By understanding these dynamics, this study will contribute to the anthropology of development, offering valuable insights into the role of culture in shaping environmental practices and policies.

### **2.10.2 Cultural Ecology**

This doctoral research employs a cultural ecology framework (Orlove & Brush, 1984) to understand the complex interplay between culture, environment, and SuPs management in Yaounde, Cameroon. This framework acknowledges the influence of power dynamics and policy on environmental resource management practices, particularly regarding SuPs (Watts & Peet, 2004).

A core principle of this framework is the co-evolution of culture and environment (Orlove & Brush, 1984). This principle emphasizes the reciprocal relationship between cultural practices and the surrounding environment. Cultural practices are shaped by the environmental context and available resources, while also influencing the environment through resource use and management strategies (Boserup, 1962). In Yaounde, for instance, traditional practices may influence perceptions and use of SuPs, while the environmental consequences of SuP pollution can necessitate cultural adaptations, such as adopting reusable alternatives.

Building on this, the framework views human communities and their environment as interconnected social-ecological systems (Holling, 1973). Examining SuP management in Yaounde requires understanding the interactions between social factors (cultural practices, economic activities, waste management infrastructure) and ecological factors (pollution levels, waste disposal strategies, impact on ecosystems). This holistic approach allows for a nuanced understanding of the challenges and opportunities related to sustainable SuP management (Holling, 1973).

Drawing from political ecology, the framework acknowledges the unequal distribution of power and resources within society, impacting access to environmental resources and participation in decision-making processes (Watts & Peet, 2004). Understanding how power dynamics, policies, and economic interests influence SuP management in Yaounde is crucial. This might involve examining the role of government policies, private sector actors, and

community organizations in shaping access to sustainable alternatives or influencing waste management practices (Watts & Peet, 2004). The research will explore three key areas:

### **2.10.2.1 Cultural Perceptions and Practices**

This research delves into how cultural values, norms, and traditional practices in Yaounde shape the use and disposal of SuPs. This involves examining how cultural factors like consumption habits, waste management practices, and resource utilization are linked to SuP choices and disposal behaviours within the Yaounde community. By understanding these cultural influences, the research aims to gain deeper insights into the complex dynamics surrounding SuPs management in this specific context.

### **2.10.2.2 Social-Ecological Interactions**

This research employs a social-ecological lens to explore how cultural practices, like consumption patterns and waste management traditions, influence the amount of SuP waste generated in Yaounde. It further examines how improper waste disposal impacts the environment through pollution and its consequences on ecosystems. Finally, the analysis investigates how these environmental consequences, such as pollution, can necessitate cultural adaptations in waste management practices, potentially leading to the adoption of more sustainable alternatives.

### **2.10.2.3 Power Dynamics and Policy Influences**

This research delves into how power imbalances, government regulations, and economic factors influence access to sustainable alternatives like reusable bags, waste management infrastructure development, and decision-making processes concerning SuPs management in Yaounde. This analysis will examine the roles of government policies, private sector actors, and community organizations in shaping access to these alternatives and influencing waste management practices, ultimately contributing to a comprehensive understanding of SuPs management in Yaounde.

By employing this framework, the research aims to achieve a holistic and nuanced understanding of SuPs management in Yaounde. Examining the interplay between cultural practices, environmental factors, power dynamics, and policies can inform the development of culturally sensitive and environmentally sustainable solutions for managing SuPs and contribute to broader efforts in promoting sustainable waste management practices (Orlove & Brush, 1984; Watts & Peet, 2004).

### **2.10.3 Interpretive Anthropology**

This research adopts a cultural lens to understand single-use plastic management in Yaounde, Cameroon. This framework draws on Clifford Geertz's concept of "thick description" (Geertz, 1973) to delve deeper than simply observing behaviours. It emphasizes the importance of understanding the lived experiences, symbolic meanings, and social contexts that shape residents' interactions with plastics.

Key components of the framework:

### **2.10.3.1 Cultural Significance of Plastic**

To gain a comprehensive understanding of SuPs management in Yaounde, this research will explore the cultural context surrounding these plastics. We will examine how Yaounde's residents perceive, value, and utilize them in their daily lives, including their role in routine activities, gifting practices, and social rituals (Le Billon & Kajisa, 2022; Njiforti et al., 2018; Ngouo et al., 2023). This exploration aims to uncover the cultural nuances influencing SuPs use and disposal, which is crucial for developing culturally sensitive and effective interventions for sustainable plastic management in Yaounde.

### **2.10.3.2 Narratives and Meanings**

To gain deeper insight, this research will analyze the narratives surrounding plastic use and waste within the Yaounde community. This involves exploring local stories, beliefs, and attitudes towards plastic, aiming to uncover the deeper meanings and values attached to its use and disposal. By delving into these narratives, we can understand the cultural significance of plastic and the motivations behind its consumption and disposal patterns, which is crucial for informing culturally sensitive interventions for sustainable plastic management.

### **2.10.3.3 Observing and Interpreting Everyday Practices**

This involves ethnographic observation, observing the everyday practices and interactions of Yaounde residents with single-use plastics in various settings, such as markets, households, and waste disposal sites. This allows for a nuanced understanding of how cultural norms and values translate into concrete behaviours (Le Billon & Kajisa, 2022).

By employing thick descriptions, the research aims to achieve the following objectives:

This research framework goes beyond simplistic explanations of SuPs management by looking beyond mere statistics or surface-level observations. Instead, it delves deeper to uncover the underlying cultural dimensions that shape plastic use and waste management

practices in Yaounde. This deeper understanding allows the research to move past superficial explanations and offer a more nuanced perspective on the issue.

This emphasis on cultural context is crucial for developing culturally sensitive interventions. By understanding the values, beliefs, and practices surrounding SuPs, the research can inform the creation of sustainable behaviour change interventions that resonate with the local community. These interventions are more likely to be adopted and lead to long-term changes in plastic use and disposal habits.

Furthermore, this research contributes to anthropological scholarship on waste management in Africa. By offering valuable insights into the unique cultural context surrounding SuPs management in Yaounde, it adds to the growing body of knowledge in this field. This enriched understanding can inform future research and contribute to broader efforts in addressing plastic pollution challenges across the continent.

In conclusion, this research framework, informed by Geertz's thick description, aims to provide a holistic and culturally sensitive understanding of single-use plastic management in Yaounde. This understanding is crucial for developing effective interventions that promote sustainable practices and address the environmental challenges associated with single-use plastics.

## **2.11 Definitions of Concepts**

You can define the concepts you wish to employ at the start of an essay. This lets the reader know right away what you are talking about. This is significant because the concept you are utilising may have multiple interpretations in the literature. Before a concept is used, it should be defined. This shows the reader that you grasp the unit/disciplinary meaning of the topic, helps 'set up' your discussion, and makes your work more accessible for the reader to understand.

### **2.11.1 Single-use Plastics**

Single-use plastics are a modern phenomenon that has significantly impacted human societies and the environment. From an anthropological perspective, single-use plastics can be understood as a cultural artifact that reflects contemporary values, behaviours, and systems of production and consumption (Liboiron, 2016). SuPs are designed for convenience and are often used for a brief period before being discarded, contributing to a "throwaway culture" that prioritizes short-term utility over long-term sustainability (Hawken, 2017). The widespread use of single-use plastics has also been linked to issues of environmental justice, as marginalized communities are disproportionately affected by plastic pollution and waste (Liboiron, 2016). In



a nutshell, an anthropological perspective highlights the cultural and social dimensions of SuP and their impacts on human societies and the environment.

### **2.11.2 Single-Use Plastics Management**

Single-use plastics management is a complex issue that requires an interdisciplinary approach, including anthropology. Anthropologists study the cultural, social, and economic factors that contribute to SuPs consumption and disposal (Liboiron et al., 2018). From this perspective, SuPs management involves understanding the cultural practices and beliefs that shape people's behaviour towards plastics (Hawkins, 2018). It also entails examining the power dynamics that underlie the production, distribution, and disposal of SuPs (Liboiron et al., 2018). Effective SuPs management, therefore, requires addressing not only technical and logistical challenges but also the cultural and social dimensions of the problem (Hawkins, 2018).

**CHAPTER THREE:  
REPRESENTATIONS OF SINGLE-USE PLASTICS**

The present chapter endeavours to thoroughly investigate the diverse cultural perspectives and attitudes towards single-use plastics management in the urban setting of Yaounde. This exploration aims to shed light on the alignment, or lack thereof, between cultural practices related to SuPs and environmental protection policies. Ethnographic research was deployed to capture the multifaceted representations of SuPs among various stakeholders involved in plastics and waste management within the city. It also seeks to unveil the nuanced ways in which different social groups perceive, use, and manage SuPs, encompassing households, businesses, waste management workers, and policymakers. This chapter seeks to enhance comprehension of the complex connection between the residents of Yaounde and SuPs by exploring their cultural, social, and economic aspects. Moreover, it aims to enhance the overall conversation on sustainable waste management methods in Yaounde.

### **3.1 Contextual Dynamics of Plastic Use and Disposal**

A "thing," like an object we can touch and see, exists in the physical world and is experienced through our senses. But it's more than just an object—it is a symbol that is deeply woven into our culture (Ingold, 2003). It carries meaning that goes beyond its physical form, revealing insights about our cultural values and relationships in different situations. Each symbol is part of a complex network of meanings known as culture. Essentially, every symbol carries significance. The meaning of a symbol is not a tangible entity and can only be understood through observation of numerous instances of the social utilisation of that symbol or similar symbols (Ingold, 2003).

The anthropologist must clarify what was not said, discover premises, deduce ideas from behaviour, and sometimes construct elaborate representations they communicate (McGee & Warms, 2013). A consumer-oriented aspect of public culture is where representations of plastics can be explored and highlighted. Lifestyles are designed to promote comfort as an essential condition of life achieved through purchasing and using commodities. Because it is the most prevalent and apparent cultural logic of modern consumer society, it can be said that humankind has always sought to enhance comfort (Nayar, 2009). Moreover, this concerns housing, furniture, or food. Comfort is the demand and condition most emphasised in marketing products

and services (Nayar, 2009). Consumer culture expresses the desire for comfort, and this desire shapes the much-desired necessities to suit this much-desired condition.

Nayar (2009) adds that after obtaining the essentials of life—food, clothing, shelter, safety, and health—humankind seeks higher quality examples and uses those exact necessities. Needs are required for survival; without them, it would be challenging or impossible. Here, *comfort* is defined as things or circumstances that improve the speed, ease, and smoothness of existence. It is the self-conscious or bodily satisfaction of the relationship between the body/mind and its immediate environment comprising persons and objects (Nayar, 2009).

Furthermore, the research aims to elucidate the mechanisms by which comfort is marketed to consumers. Additionally, the study investigates the role of packaging design in fulfilling human comfort, with a focus on the form of packaging. Therefore, 'Unpacking' comfort unravels the multiple discourses of utility, stylisation and self-branding, heritage and sacralisation, among others Nayar (2009). This will set the stage for exploring the representation of plastics in the consumer culture of the inhabitants of Yaounde.

As observed by anthropologists, the accumulation and consumption of goods are driven by social competition (Haenn & Wilk, 2006). The representation of plastics in Yaounde reflects the inhabitants' desire for comfort and the cultural design to change human habits to improve comfort (Dudley, 2012). Plastic management creates linkages between individual and social forms of production and consumption, connecting local and global contexts (UNEP, 2018). Plastics are preferred for their non-corrosive nature, resistance to humidity, and economical reuse, making them a versatile and practical option for various household purposes (Andrady, 2015).

In business settings, plastics are essential for packaging goods, providing emotional comfort, security, and safety, particularly for food, cosmetics, and pharmaceuticals. Plastics preserve items, protect against damage, and are lightweight and easy to handle (Andrady, 2015). The perception and use of plastics can vary depending on the setting, with individuals exhibiting different attitudes and behaviours towards plastic waste management at home versus in a work environment. For example, a research participant mentioned discarding plastic bottles at work but reusing them at home to store water or cooking oil.

### **3.2 Unveiling the Social Construction and Representation of Single-Use Plastics**

Single-use plastics are products of social construction and can be considered material culture. The study of these plastics draws from Dudley (2012), who posits that studying material culture requires special attention to scrutinising practices, that is, what people do with things. Furthermore, he assumes that meaning does not inhere in things but is activated by them. Meaning is understood here as a complex process of interaction in which people, objects, environments, histories, words, and ideas participate. The meaning of SuPs among the inhabitants of Yaounde is shared through their interactions, which accounts for the different ways they use them.

As propounded by Souhila (2012), single-use plastic representation can be comprehended as a form of a global vision that restructures reality, which permits an integration of all the characteristics of the object, their past experiences, and systems of attitudes and norms. It is an organised set of opinions, attitudes, beliefs, and information about an object or situation. It is determined at the same time by the subject itself (its history and life story), by the social system and ideology in which it is inserted, and by the nature to which it is linked the subject has with the social system.

Simply put, representation is a tool that is used to highlight the reality or world views of single-use plastics by the inhabitants of Yaounde; it is a social construct that they have elaborated to interpret the world based on their interests, meaning that different people of the group or society can have to demonstrate different attitudes in the way they use or manage single-use plastics.

Also called SuPs embody ingrained consumer culture, an attitude commonly shared among the inhabitants of Yaounde demonstrated by discarding or throwing away plastics generally after they use them for the first time. "Zero Waste" Scotland defines SuPs as "all carrier bags that are supplied with the intention that they are to be used once, to carry goods away from the point of sale" (Barnes, 2014). After being used once, when not discarded or thrown, they are recycled or reused depending on certain types of single-use plastics and the item concerned. It is, therefore, necessary to delineate single-use plastics from durable plastics designed for similar purposes. To solve packaging problems, the inhabitants of Yaounde produce and use the following kinds of single-use plastics: packaging bags, bottles, cutlery, and take-away foam containers, to name a few. Unfortunately, it contributes significantly to the amount of plastics found in municipal solid waste, which will be dealt with in subsequent chapters.

### **3.2.1 Plastic Bottles**

Polyethylene terephthalate (PET) containers, commonly referred to as plastic drinking bottles, are the preferred choice for water storage among the residents of Yaounde. These items play a crucial role in their daily lives. The preference for plastic bottles over alternative packaging is primarily driven by their practicality and convenience, enhancing the product's overall appeal.

### **3.2.1.1 Materiality and Function**

In Yaounde, Cameroon, the plastic bottle goes beyond its primary purpose of quenching thirst. It becomes a versatile object deeply intertwined with daily life, carrying complex cultural significance and influencing social interactions. One significant aspect is the changing symbolism of different materials. PET plastic, once associated with affordability and practicality, now conveys a sense of modernity and health consciousness. On the other hand, glass bottles, often seen as superior in terms of purity and taste, can signify luxury and social status in specific contexts. These shifting material narratives demonstrate the interplay between global trends and local interpretations, which affect consumer choices and shape the value and usage of plastic bottles (Djodzeka, 2023).

The function of bottled water extends beyond simple hydration. It represents sophistication and accompanies individuals throughout their day, symbolising access to resources and a particular urban lifestyle. Moreover, bottled water can act as a social lubricant, facilitating introductions, initiating conversations, and even serving as a small offering in informal greetings. These social functions highlight the cultural significance of bottled water beyond its practical purpose, revealing its deep integration into the social fabric of Yaounde.

However, the materiality and function of plastic bottles also raise concerns and anxieties. The environmental impact of SuPs is increasingly acknowledged, creating a conflict between convenience and environmental responsibility. Moreover, the commercialisation of water raises concerns about affordability and equal access to this essential resource. These tensions emphasise the importance of adopting critical consumption practices and sustainable alternatives that balance individual needs with environmental and social well-being (Djodzeka, 2023).

In summary, SuP bottles in Yaounde are more than just containers for water; they also carry cultural significance and influence social interactions. Understanding their role is crucial for addressing plastic pollution and water accessibility challenges in the city. Additionally, companies producing mineral water and beverages in Yaounde prefer single-use plastic bottles over glass bottles with steel caps due to their benefits.

Besides its well-known benefit of holding water and beverages, they are easy to transport from one place to the other. They are light as compared to glass bottles. The weight of a glass bottle could be forty times that of a plastic bottle. For this reason, SuPs bottles are sustainable. After using SuPs to package products, especially those destined for children, like beverages and yoghurt, manufacturers find plastic bottles a better option because they are more resistant than bottles. If they fall, they do not break (Tabeyang, 2018).

In Yaounde, it is common for customers to consume beer on the premises of beer parlours. In the past, customers who wished to take their beer to go were required to bring a corresponding glass bottle in exchange. However, the introduction of plastic bottles has made it easier for customers to take their beer to go, as they are lightweight and disposable. This is particularly useful in small business establishments with limited seating (Nayar, 2009). Plastic bottles are also a more sustainable option as they can be reused for purposes other than their original intended use.

#### **3.2.1.1.1 Cultural Interpretations Associated with Purity, Durability and Status**

This content explores the cultural meanings attached to the choice between polyethylene terephthalate (PET) plastic and glass bottles. The materiality of these bottles speaks volumes about purity, status and durability in the context of social aspirations and practical realities. PET plastic bottles are associated with affordability and urban cool, resonating with a younger generation and symbolising accessibility and resourcefulness. Glass bottles, on the other hand, are seen as elegant and purely connected to premium brands and social distinction.

The act of gifting a glass bottle of water is a symbol of social status and refined taste. The choice between PET bottles and glass bottles is not solely based on practicality but also involves cultural interpretations of materiality. Glass is often viewed as a purer material. At the same time, the opacity of PET can raise concerns about hidden impurities. Additionally, glass is perceived as more valuable and permanent than PET's disposable nature. However, these cultural interpretations are flexible, as environmental concerns regarding plastic pollution and unequal access to clean water challenge the use of both PET and glass bottles (Njomo, 2019). It is essential to comprehend these cultural meanings to address the complexities of water consumption and sustainability. Designing solutions that consider social and cultural aspirations alongside practicalities is crucial. A SuP bottle in Yaounde is more than just a container; it reflects cultural narratives and provides insight into the challenges and opportunities of a sustainable future where access to clean water aligns with environmental respect and cultural aspirations.

### **3.2.1.1.2 Plastic Bottles as a Symbol of Modernity, Health and Luxury**

Single-use plastic bottles have evolved beyond their primary function of quenching thirst. It has become a symbol of modernity, health and luxury in the urban context. Carrying a branded bottle of water is seen as connecting to the city's pulse and adopting contemporary trends. Drinking bottled water is not just consumption but a performance of modernity aligning individuals with the fast-paced city life. This association is reinforced by advertising campaigns that link bottled water with urban professionals' success and a cosmopolitan lifestyle (Mossus et al., 2022).

Bottled water, especially those marketed as "pure" or "natural," is perceived as a healthy alternative to potentially contaminated tap water. Consumers attribute a sense of well-being and self-care to every sip, considering it a safe and healthy choice. Aggressive marketing campaigns emphasising the health benefits of bottled water further solidify its association with a healthy lifestyle (Mossus et al., 2022).

For some, bottled water goes beyond necessity and enters the realm of luxury. Premium brands, often in elegant glass bottles, become aspirational objects that signify social status and sophistication. Gifting such water is a way to demonstrate respect for social standing and participation in exclusive social circles. Consuming bottled water in specific contexts carries a symbolic meaning of elevated status.

However, it is essential to acknowledge the shadows that accompany these positive associations. Environmental concerns about plastic pollution raise anxieties about the convenience and modernity of bottled water. The commodification of water also raises concerns about affordability and equitable access to this vital resource, highlighting social disparities.

Understanding the complex symbolism of bottled water in Yaounde is crucial for developing sustainable solutions that address the practical aspects of water access and the social and cultural aspirations associated with its consumption. It requires recognising the diverse meanings of bottled water while promoting responsible consumption practices and advocating for equitable access to safe and affordable water for all.

### **3.2.1.1.3 Practical Uses Beyond Water Storage**



Single-use plastic bottles in Yaounde are being repurposed in various creative ways, demonstrating the resourcefulness and innovation of the city's residents. They are transformed into containers for spices and tools and even used as paintbrush holders or musical instruments.

Additionally, households use them to store beverages other than water and various food items. In gardening and agriculture, these bottles serve as planters, watering cans, and seedling protectors, while some farmers use them to build irrigation systems. In specific neighbourhoods, plastic waste bottles are repurposed for vertical agriculture, enhancing the environment's aesthetic. Furthermore, plastic bottles are used as construction materials, recycled as bricks or filled with sand or gravel for foundations (Nanga, 2022).

They can also be repurposed as makeshift roofing tiles, providing temporary shelter and natural illumination. These practices extend the lifespan of plastic bottles and create economic opportunities, with artisans weaving them into baskets and mats to sell at markets. However, addressing the environmental challenges associated with increased plastic use and promoting sustainable alternatives and waste management systems is essential. By recognising and supporting these resourceful practices while advocating for sustainability, Yaounde can pave the way for a future where environmental responsibility and resourcefulness go hand in hand.

### **3.2.1.2 Social Practices and Interactions**

Plastic bottles play a significant role in social interactions and cultural practices. Besides providing hydration, they are used to initiate conversations and establish connections. These bottles are also involved in cultural rituals that symbolise purification or the offering of drinks. Additionally, they are used as a form of currency in small transactions, highlighting their versatility and perceived worth in daily interactions.

#### **3.2.1.2.1 Roles of Plastic Bottles in Rituals, Gift-giving and Social Interactions**

The use of plastic bottles as vessels for sacred water holds a profound significance in various cultural and religious rituals. Drawing parallels to the popular souvenirs from Lourdes, where plastic bottles filled with water from the pilgrimage site are revered for their believed miraculous properties, similar practices are observed among Hindus (Luig, 2018). In Yaounde, plastic bottles filled with water from revered sites or springs hold a similar symbolic importance, often incorporated into domestic shrines or ritual spaces. These plastic vessels, sometimes adorned with printed images representing sacred figures or locations, serve as tangible connections to divine blessings and spiritual healing. Through the ritualistic placement

of these plastic bottles in households, individuals in Yaounde express their reverence for sacred sites and seek spiritual connection in their everyday lives (Luneau, 2007).

The literature reveals a parallel phenomenon in Yaounde, where plastic bottles filled with water from revered sites serve as potent symbols within local rituals and beliefs. Just as pilgrims collect souvenirs from Lourdes believed to possess miraculous properties, inhabitants of Yaounde partake in similar practices imbued with cultural and spiritual significance. These plastic vessels, often containing water sourced from sacred springs or ritual sites within the city, are revered for their perceived healing qualities and divine blessings.

In Yaounde, plastic bottles play a multifaceted role in both traditional and syncretic rituals, reflecting a blend of cultural practices and spiritual beliefs. Beyond conventional religious observances, some engage in purely pagan rites, such as burying plastic bottles, herbs, or even chicken eggs behind their dwellings or in other secluded areas. These rituals, often carried out in domestic settings or outdoor spaces, signify a deep connection to the natural world and a reverence for ancestral traditions. The act of burying plastic bottles alongside other symbolic items underscores the belief in the potency of ritual objects to invoke spiritual protection, ward off negative energies, or promote fertility and abundance. Through these practices, individuals in Yaounde reaffirm their cultural heritage and spiritual connection to the land, utilizing plastic bottles as conduits for ancestral wisdom and ritualistic expression (Luneau, 2007).

#### **3.2.1.2.2 Preference for Branding and Advertising**

It is essential to recognise the impact of branding and advertising on cultural perceptions and consumer choices related to different types of bottled water. By exploring the narratives and associations created by luxury brands, PET plastic bottle brands emphasising purity, health and local brands, we can elucidate their preference by brewery companies. Furthermore, considering factors such as age, social class and gender in shaping these perceptions enhances understanding of the complex relationship between materiality, cultural perceptions and consumerism in a rapidly changing urban context. Packaging that targets children prefers plastic bottles rather than glass bottles (Business in Cameroon, 2017).

#### **3.2.1.2.3 Gender and Plastic Bottles Interplay**

By exploring the gendered dimensions of consuming SuPs bottles, we are highlighting how traditional gender roles shape practices and perceptions surrounding plastic bottle use.

Women are often the primary managers of household water, leading to their heightened awareness of bottled water consumption's financial burden and environmental impact. Meanwhile, men may use branded bottles to display their status and conform to cultural expectations of masculinity (Kiven, 2022).

However, younger generations are challenging these traditional roles and embracing the convenience and urban cool associated with plastic bottles. Understanding these gendered dimensions is crucial for designing effective solutions, such as promoting responsible consumption and advocating for improved plastic waste management systems. This analysis emphasises the need for inclusive strategies that consider women's and men's different roles and responsibilities in water acquisition and household management. Overall, examining the issue of plastic bottle use through a gendered lens provides meaningful comprehension of social dynamics, cultural values and the pursuit of a sustainable future in an evolving urban environment (Njodzeka, 2023; Feukeng, 2021).

### **3.2.1.3 Disposable and Transformation**

The journey of single-use plastic bottles in Yaounde involves repurposing and transforming them in various innovative ways, showcasing the resourcefulness of residents. They are creatively used for practical tools, artwork, and even rituals and offerings, reflecting societal anxieties and ritualistic practices. Artisans skillfully weave plastic into baskets and mats, demonstrating how resourcefulness can lead to economic empowerment and cultural preservation. Converting bottles into planters symbolizes resilience and food security in a city where resources are scarce, promoting sustainable agriculture and reducing plastic pollution. Additionally, using bottles for construction highlights community collaboration and the ability to turn waste into shelter, with plastic pavement being a significant example of repurposed plastic in construction (Njomo, 2019).

### **3.2.2 Plastic Bags**

The use of disposable plastic bags in Yaounde reflects a complex interplay of socio-cultural and environmental factors. These bags are ubiquitous in the city, serving as a convenient and adaptable solution in its fast-paced urban environment. However, their flimsy nature underscores the temporary nature of consumption and raises concerns about environmental fragility. These bags symbolise resilience and resourcefulness in informal markets but underscore unequal access to sustainable alternatives. Additionally, branded logos represent aspirations and social status while also serving as a visual reminder of globalised consumerism and its impact on local communities. To fully grasp the significance of these bags,

it is essential to explore the intersection of materiality, social practices, and cultural anxieties, providing valuable insight into how Yaounde's relationship with consumption and sustainability is evolving (Manga et al., 2008)

### **3.2.2.1 Materiality and Function**

In Yaounde, plastic bags are not just for carrying things—they show how people use things and interact in the city. Looking at these bags from an anthropological perspective tells us a story about how people find new ways to use things, care about the environment, and change how they do things together. These bags are designed to be cheap, light, and waterproof, which makes them great for carrying stuff. But they don't last long, and that's not good for the environment. In Yaounde, people use plastic bags in different ways, like using them as raincoats or containers for food. This shows how resourceful the people in the city are. However, using so many plastic bags can harm the environment. Some people are trying to use less plastic because they care about the environment, but it's hard because there aren't many affordable alternatives (Tabeyang, 2018).

#### **3.2.2.1.1 From Practical Tools to Ubiquitous Symbol of Consumerism**

Exploring the significance of single-use plastic bags gives way to a discussion of how the plastic bag initially arrived as a practical solution, offering convenience and affordability for diverse socio-economic groups. However, as its use proliferated, the plastic bag became a symbol of consumerism and disposability, contrasting with more durable and culturally significant past materials. This shift sparked a growing awareness of environmental consequences and a desire for alternatives. However, the plastic bag's grip on the city's social fabric remains strong due to a lack of accessible alternatives and ingrained social practices. The content emphasises the importance of understanding plastic bags' multifaceted meanings and functions to address plastic pollution effectively and move towards a future where convenience and sustainability coexist in Yaounde (Feukeng, 2021).

This content explores the transformation of plastic bags from practical and disposable tools to symbols of consumerism and disposability. Anthropologists analyse this shift as a reflection of the city's evolving identity characterised by globalisation and a focus on rapid consumption. However, there are also signs of resistance, such as local initiatives promoting reusable bags and repurposing plastic waste. The story of the plastic bag in Yaounde is seen as a complex and evolving ballad of progress, convenience and the human desire to find balance in a changing world. Anthropologists are observing whether the prominence of plastic bags will

fade or if a new melody of responsibility and reuse will emerge in Yaounde's vibrant tapestry of life (Feukeng, 2021).

### **3.2.2.1.2 Cultural Perceptions of Different Kinds of SuPs Bags**

The different types of disposable plastic bags in Yaounde carry varying cultural significances depending on their context. Here are some instances of the diverse perceptions associated with these bags in the city. The see-through, delicate tote bag serves as a symbol of quotidian existence. Its transparency facilitates the conspicuous presentation of its contents, providing a glimpse into an individual's financial standing and consumer preferences. Despite its affordability and widespread availability, its fragility and connection to casualness contribute to its disposable perception and role in generating waste (Feukeng, 2021; In Yaounde, plastic bags mean different things to different people. Branded bags from supermarkets or big brands show that someone is modern and can buy things from around the world, making them seem important. Bags with political or religious messages can change how people think or believe. Some people fix or reuse plastic bags, which shows they are smart and care about the environment. Others make art from old bags, showing how people can make beautiful things from trash. Plastic bags are important for people with less money and are part of everyday life in lively neighborhoods. Young people see plastic bags as modern, but older people see them as useful tools for daily life (Feukeng, 2021).

In essence, the impact of plastic bags in Yaounde is multifaceted, reflecting their utilitarian function and role in shaping sensory experiences, rhythms of daily life, and the social dynamics of different neighbourhoods within the city. These observations underscore the complex interplay between material culture, social context, and individual experiences within the urban landscape (Tabeyang, 2018).

Younger generations, more attuned to environmental concerns, view plastic sceptically and opt for reusable alternatives. However, the convenience and affordability of plastic still hold sway, especially for students and young entrepreneurs. In specific traditional neighbourhoods, older generations regard plastic with a sense of acceptance and practicality, as the ease of using plastic has become interwoven into the cultural fabric, becoming a familiar foundation in their daily lives (Njodzeka, 2023; Feukeng, 2021).

### **3.2.2.1.3 Symbolic Meanings of Carrying or Refusing Plastic Bags in Different Contexts**

The simple plastic bag goes beyond its ordinary function as a carrier in various situations, transforming into a symbol filled with significance. In wealthier environments, declining a bag can indicate awareness of the environment and ethical shopping, a mark of belonging to a privileged group that prioritises sustainability (Lele, 2023). On the other hand, using a plastic bag in communities with limited resources might suggest practicality and ingenuity as a method to make the most out of scarce means.

The symbolic dance goes beyond economic divides as a plastic bag can evoke nostalgia for older generations, reminding them of a pre-globalisation and convenience era. However, young artists see it as an opportunity to repurpose and use it as a canvas for their creative expression (Lele, 2023). The meaning of a plastic bag varies for each individual, reflecting the complex relationship between consumption identity and the environment.

### **3.2.2.2 Social Life of Single-use Plastic Bags**

In Yaounde, plastic bags mean different things to different people. Branded bags from supermarkets or big brands show that someone is modern and can buy things from around the world, making them seem important. Bags with political or religious messages can change how people think or believe. Some people fix or reuse plastic bags, which shows they are smart and care about the environment. Others make art from old bags, showing how people can make beautiful things from trash. Plastic bags are important for people with less money and are part of everyday life in lively neighborhoods. Young people see plastic bags as modern, but older people see them as useful tools for daily life.

### **3.2.2.3 Disposal and Transformation**

Li (2015) exposes the power dynamics underlying plastic production and consumption. Powerful corporations and vested interests can influence policies and practices, prioritising profit over environmental responsibility. Addressing SuP pollution requires challenging these power structures and advocating for policies that incentivise sustainable production, responsible consumption, and equitable waste management solutions.

The rate at which many people head to grocery shops or markets to purchase different items makes them depend on the convenience of these bags. Holding or carrying goods, especially heavy, may be annoying or embarrassing; placing those goods in plastic bags is more efficient, and transportation is more manageable. To comply with international commitments, Cameroonian authorities have expressed an interest in the environmental effects of SuPs. Their perception of SuPs is shaped by the policies they have enacted and are implementing.

### 3.2.3 Foamed Containers

Single-use plastic foamed containers can be analysed by determining their significance regarding material culture, social practices, and environmental impact. In Yaounde, these containers go beyond their function of holding food and drinks; they also symbolise modernity, convenience, and social status. From an anthropological standpoint, single-use plastic foamed containers reflect more significant cultural and economic dynamics. Adopting these containers may be influenced by urbanisation changes in eating habits and the impact of global consumer culture.

Additionally, we can examine the disposal of these containers and their impact on the local environment by looking at waste management practices, ecological beliefs and the relationship between humans and their surroundings. Ethnographic studies to understand how different social groups perceive and utilise these containers by observing everyday practices related to food consumption, conducting interviews to explore attitudes towards single-use plastics, and investigating the role of these containers in social gatherings and rituals reveal a multifaceted representation among the Yaounde city dwellers.

Anthropologists contribute to a deeper understanding of the complex relationships between material objects, human behaviour, and societal change by examining the meanings and uses of these objects within their broader social context (Terry, 2015). Material objects hold deeper meanings than just their utility for their users. The lifestyle of the inhabitants of Yaounde is greatly influenced by how they create, use, display, and incorporate material objects into their lifestyle. Every object has a specific role or function and is interpreted differently.

Foamed plastics have been widely used by electronic manufacturing gadgets or devices to protect the devices against any shocks. The same material has been used to manufacture square boxes or containers with certain advantages, especially as they are light and safe to contain food. The significance or value of foamed containers is co-constructed as they are appropriated and used in society (Phoenix, 2006). In simpler terms, the way people use and interpret material objects, such as foamed containers, reflects their cultural beliefs and practices, and contributes to shaping their social and economic relationships.

Moreover, this research also considers the historical and political aspects of single-use plastic foamed containers in Yaounde, which involves studying the influence of government policies on international trade and the activities of multinational corporations in shaping the production, distribution and consumption of these containers. In summary, the representations

of SuPs foamed containers in Yaounde from an anthropological perspective encompass various cultural, social, and environmental factors (Kramm & Völker, 2022).

### **3.2.4 Plastic Sachets**

Plastic sachets, small and often used once, are everywhere in many African cities, like Yaounde in Cameroon. Knowing what people think about these bags is important for finding better ways to deal with trash. This review looks at what researchers have written about plastic bags in Yaounde. It talks about how people see them as easy to use, how they affect the environment, and how they relate to money and jobs.

#### **3.2.4.1 Convenience and Affordability**

Plastic sachets are everywhere in Yaounde, making life easier and cheaper for people (Makia, 2018). These small bags are light and easy to carry, perfect for holding things like water or sauces (Njomo, 2016). They are also much cheaper than other containers, so everyone can afford them, no matter how much money they have (Njomo, 2016). Because of this, plastic sachets are a big part of life in Yaounde, showing how modern and practical the city is (Makia, 2018). People in Yaounde use them a lot because they're so handy and cheap (Njomo, 2016). Several studies highlight the perceived convenience of plastic sachets for packaging and consuming various goods, particularly water and food (Gaké et al, 2022). Their low cost makes them accessible to a wider population, contributing to their widespread use (Njomo, 2019).

#### **3.2.4.2 Environmental Impact and Waste Management Challenges**

Plastic sachets pose significant environmental challenges in Yaounde, impacting both the city's ecosystem and its residents. The proliferation of plastic waste contributes to pollution of water bodies, soil degradation, and harm to wildlife (Njomo, 2016). Furthermore, improper disposal of plastic sachets exacerbates waste management challenges, as the city struggles to cope with the volume of plastic waste generated daily (Makia, 2018). In Yaounde, plastic sachets are not only seen as a convenient packaging option but also represent a cultural norm deeply embedded in daily life (Makia, 2018). Despite growing awareness of their environmental impact, efforts to address plastic waste management in Yaounde face numerous challenges, including inadequate infrastructure, lack of public awareness, and limited resources (Njomo, 2016).

However, the literature also emphasizes the significant environmental concerns associated with plastic sachets. Their ease of disposal often leads to littering and improper waste



management, contributing to clogged drainage systems and pollution (Gaké et al, 2022; Njomo, 2019).

### **3.2.4.3 Socio-Economic Factors and Livelihoods**

The informal sector that has emerged around plastic sachet collection and recycling highlights the complex socio-economic dimensions of the issue (Gaké et al., 2022). While some view plastic sachets as a source of income for waste pickers, others emphasize the health risks and precarious working conditions associated with informal recycling practices (Njomo, 2019).

### **3.2.5 Water Sachets in Yaounde**

The use of plastic sachets for packaging in Yaounde has been a topic of interest in recent literature, highlighting the environmental and societal implications of this practice. Plastic sachets, often referred to as "pure water sachets," have become a ubiquitous sight in Yaounde, providing an affordable and accessible source of clean water for many residents (Achoundong et al., 2019).

The proliferation of plastic sachets has raised concerns regarding their environmental impact, particularly in terms of waste management and pollution. Studies have shown that these sachets contribute significantly to the city's waste generation, with inadequate disposal and recycling facilities leading to littering and environmental degradation (Ngoumfo et al., 2017).

Moreover, the use of plastic sachets has also been linked to societal implications, such as the perpetuation of poverty and the informal economy. The production and distribution of these sachets often involve informal sector workers, who face challenges related to low wages, poor working conditions, and limited access to social protection (Temgoua et al., 2018).

In response to these challenges, various initiatives have been proposed to address the issue of plastic sachets in Yaounde. These include the promotion of alternative water sources, such as public taps and water dispensers, as well as the implementation of waste management programs and recycling initiatives (Mbua et al., 2019).

Overall, the literature on the representations of plastic sachets in Yaounde highlights the need for a holistic approach to addressing the challenges posed by this practice. By considering both the environmental and societal implications, stakeholders can work towards sustainable solutions that promote access to clean water while minimizing the negative impacts of plastic waste

### **3.2.6 Disposable Plastic Plates and Cutleries**

The use of disposable plastic plates and cutlery has become increasingly popular in Yaounde, Cameroon, contributing to the growing problem of plastic waste in the city. These items are often portrayed as convenient and affordable, but their environmental impact cannot be ignored. According to a study by Njiforti et al. (2018), disposable plastic plates and cutlery are among the most common types of plastic waste found in Yaounde's streets and drainage systems.

Representations of disposable plastic plates and cutlery in Yaounde are often associated with street food vendors and social events such as weddings and funerals (Ngouo et al., 2023). These events generate large amounts of waste, and the use of disposable plastic items is seen as a convenient solution. However, the environmental consequences of this convenience are significant. Disposable plastic items are often not properly disposed of and can end up in the environment, causing harm to wildlife and contributing to the global problem of plastic pollution (Achankeng et al., 2020).

Efforts to address the issue of disposable plastic waste in Yaounde have focused on promoting the use of biodegradable alternatives and improving waste management infrastructure. For example, a study by Fokam et al. (2021) found that using biodegradable plates and cutlery made from locally available materials such as plantain and banana leaves could be a viable alternative to disposable plastic items. However, the study also noted that the success of such initiatives depends on the availability and affordability of these alternatives, as well as public awareness and education about their benefits.

### **3.2.7 Facemasks**

The COVID-19 pandemic has brought about significant changes in the representation and perception of facemasks in Yaounde. Prior to the pandemic, facemasks were primarily associated with healthcare settings and were not commonly used in public spaces (Ngwa et al., 2020). However, with the onset of the pandemic, facemasks have become a ubiquitous symbol of safety and protection (Tchounwou et al., 2021).

Studies have shown that the representation of facemasks in Yaounde during the pandemic has been largely positive, with many viewing them as a necessary tool for preventing the spread of the virus (Ngwa et al., 2020; Tchounwou et al., 2021). However, there have also been negative representations of facemasks, with some viewing them as a symbol of fear and anxiety (Ngwa et al., 2020).

The representation of facemasks has also shifted in the post-pandemic era. While facemasks are still widely used in Yaounde, there has been a growing debate about their continued use and effectiveness (Tchounwou et al., 2021). Some view facemasks as a hindrance to social interaction and communication, while others see them as a necessary precaution in the face of ongoing health risks (Tchounwou et al., 2021).

Overall, the representation of facemasks in Yaounde during and after the COVID-19 pandemic has been complex and multifaceted, reflecting shifting attitudes and perceptions towards safety, health, and social interaction. Further research is needed to fully understand the long-term implications of these shifting representations on public health and social behaviour.

### **3.2.8 Polystyrene Foam**

Polystyrene foam is a type of plastic that is widely used in various industries, including packaging, construction, and food service. In Yaounde, polystyrene foam is commonly used as a packaging material for food and other products due to its low cost and insulation properties. However, the use of polystyrene foam has raised concerns about its environmental impact and waste management.

According to a study on the management of plastic waste in the UEMOA region, polystyrene foam is a thermoplastic that can be recycled due to its ability to melt under heat and regain its rigidity upon cooling (UMOA, 2002). However, the same study notes that polystyrene foam is often non-recyclable due to its thermodurcissable properties, which make it infusible and unable to be melted and reformed into new products (UMOA, 2002).

In a study on the use of expanded polystyrene technology in building construction in Kenya, polystyrene foam is described as a rigid, closed-cell foam plastic with low thermal conductivity, making it an ideal material for insulation in building construction (Muriithi & Mwangi, 2013). The study also notes that expanded polystyrene can be recycled and reused in various applications, including building construction and packaging.

In a journal article on the anthropology of plastics, polystyrene foam is mentioned as a type of plastic that has become ubiquitous in everyday life, particularly in food service and packaging (Hawkins et al., 2015). The article highlights the need for local studies to understand the cultural and environmental impact of plastics, including polystyrene foam, in different contexts.

In summary, polystyrene foam is a type of plastic that is widely used in various industries, including packaging, construction, and food service. While polystyrene foam has

some recycling potential due to its thermoplastic properties, it is often non-recyclable due to its thermodurcissable properties. The use of polystyrene foam in Yaounde, particularly in food service and packaging, highlights the need for further research on its cultural and environmental impact in different contexts (UMOA, 2002; Muriithi & Mwangi, 2013; Hawkins et al., 2015).

### **3.3 Contests of Meaning over Framings of Lightweight Plastic Bags**

Bennett (2010), a political theorist known for her work on nature, ethics, and emotion, switched her focus to what she termed *vibrant matter* from the human experience of things to things themselves. Bennett (2010) contends that political theory must do a better job of acknowledging active citizenship. Nonhuman forces are involved in events. She proposes a "vital materiality" that extends through and across both human and animal bodies.

Hall (1997) in his representation posits that there is no factual or unique representation of people, events, or things; instead, people, events, or things can be represented in many different ways. Meanings or representations can be contested because they are constituted by generating representations: what is absent, present, or different. The way lightweight plastic bags are represented is contested in Yaounde. The Government, consumers, and factory producers do not share the same meaning. While the Government is trying to stereotype the meaning of these categories of plastics through its policies to cause a change of behaviour among consumers, the consumers remain resolute.

#### **3.3.1 Government Agents' Perception of Single-use Plastics Bags**

The authorities in Cameroon view the management of lightweight plastics as a significant institutional challenge due to its adverse environmental impact. Governments utilise laws as a tool to regulate societal behaviour. Law, functioning as a mechanism of social construction, dictates behaviours by creating identities and objects (Pottage & Mundy, 2004; Aboueleid, 2022). The idea of fabrication involves actions that are deeply embedded in complex and culturally specific layers of texts, practices, tools, technical processes, artistic creations, stylized behaviours, linguistic elements, and physical orientations (Pottage & Mundy, 2004). The Government plays a role in shaping this fabrication process by implementing laws or policies.

In the ethnographic context of Yaounde, the government has instituted mandatory policies to curb the environmental pollution caused by SuPs. These "illicite poly bags" as called by the Government authorities are a nuisance to the environment and even human health because they are very light and take a long time to break down or decompose. They are illicit

because the authorities have disapproved of them. The rest of the society does not share this disapproval.

The illicit poly bag is discrepant within society. On the one hand, the authorities consider the lightweight poly bags to be the disapproving reason they have been labelled "illicit." On the other hand, the consumers are made up of the society's inhabitants. Their attitudes attest to what this type of poly bag represents. As stipulated earlier, the government banned these plastics through their policies, but implementing them faces stiff resistance. They are still preferred for packaging over most other options, like paper.

### **3.3.2 Choice of Single-use Plastic Bags**

Writ large, the embodiment of an object may be defined as the sense that the object has become "part of us" in a similar way that our limbs or fingers are parts of us. (Shettler et al., 2019). SuPs bags are known to be resistant and less prone to being torn. Above all, they resist weather conditions and have become an extension of our bodies. SuPs bags are more sustainable than paper bags. Its attributes make them reliable in carrying goods and preferable to paper bags that get torn quickly, especially when they are exposed to moisture or become wet. Because they are made of polyethylene or polythene, a synthetic resin, they are flexible, rigid, and strong. As they have waterproof attributes, they are ideal for packaging and outperform other options like cloth bags and paper bags in rainy weather.

Many respondents in the neighbourhoods of Yaounde admitted to always carrying them everywhere they go. They keep them in their bags; some call this "should-in-case," meaning they may be confronted with a situation where they need packaging. On 12 November 2020, in the Biyem-assi neighbourhood, a participant in the study stated, "I am unable to leave my residence without my 'should-in-case'; I would prefer to forget any other item except for my 'should-in-case.'"

The plastic will sometimes rescue them from embarrassment when they receive a surprised or an unexpected gift. This is because objects are central to the formation of human behaviour as subjects as they are engaged in a relationship with the objects. As such, plastic bags can be the medium through which social relations are forged and reinforced (Nayar, 2009). Invitees, mostly the women folk, when they honour an invitation to a feast where food is shared, carry their "should-in-case" with them. They may be used to store extra food or have the option of taking food to their homes.

Transparent plastic bags are also essential because they are necessary for packaging in health centres and hospitals. Syringes and other pharmaceuticals are put in these plastics for customers. With the advent of the Coronavirus, these lightweight plastic bags represent a functional protective solution. More than just packaging, they serve the purpose of gloves. After they are used, they are immediately discarded. This goes a long way to control the transmission of the virus and protect it from further spreading.

Added to the fact that they are light, they are widely used for packaging in markets and other business premises in Yaounde. To name these examples, they are also used for wrapping objects like soap, bread, and peanuts. Respondents acknowledged that plastic bags occupy less space than paper bags. Bags made of other materials like leather often have zips to close them. Unlike these kinds of bags, SuPs bags are quick to open and close; thus, they save time.

The representation of the much lighter ones banned in Cameroon must be noticed. They offer the most comprehensive packaging alternative when packaging smaller commercial items in grocery shops, markets, and street vendors. Roadside restaurants also use this type of plastic to package cooked food for customers, especially if they still need to get a plate and want to take the food home. They are the cheapest of all the other kinds of plastics. They are, therefore, more economical for traders. Despite the ban, they are still ubiquitous. They are accessible and can be found and bought in the nearby shops.

These lightweight SuPs bags have become very useful for packaging on business premises and households. They are widely used to wrap certain foods like "fufu." They have come to replace the conventional plantain leaves in certain traditional dishes. Modernity has brought about specific adaptation changes in the patterns of behaviours as Globalisation pressures have forced civilisations throughout the globe to become increasingly similar (Abraham et al., 2009). In Yaounde, lightweight plastics are used as an alternative in the absence or scarcity of plantain leaves. Unlike leaves that need to be washed, these plastics can be used immediately after they are bought.

### **3.3.3 Representations of Single-Use Plastics by Plastic Manufacturers**

The post-independence period brought incipient changes in the commercialisation of certain products and brought significant transformations in packaging. Yaounde, like many African cities, started receiving goods imported from other countries, especially developed ones. Consuming the products was crucial, but how the goods were packaged pleased the inhabitants. Some of these imported products were packaged with plastics. Shortly after, with

the advent of manufacturing companies that were first introduced, because they were expatriates who owned them, they imported the same mode of production from their countries.

The state regulates packaging through an agency that checks if certain packaging principles are respected. Manufacturers are under obligation to comply with these principles. Some food industry sectors seek state involvement in regulating packaging (Milanesio, 2013). To protect the consumer's health, industries that produce food products in Yaounde use SuPs for packaging. Even though this choice is somewhat coercive, they are well appreciated by consumers. Failing to comply leads to the payment of fines, the business closing down, or even incarceration. Goods may be confiscated or banned from being commercialised. All these measures cause a change of behaviour on the part of the manufacturers.

Government regulations demand that certain information related to the content or products be labelled on every product. There is a need, therefore, to choose a packaging material that can easily be labelled. Plastics represent a better option because their surface facilitates printing writings, logos, or any form of graphic design. Hitherto, toothpaste producers used metal tubes for packaging. The steel metal could not retain the writings. Today, they have replaced their packaging option with plastics because plastics, with their surface covered with some tiny films, keep these writings much longer.

Businesses faced with competition have come to understand that they must standardise their containers to attract more customers, thereby increasing their sales. The attributes of SuPs make them look attractive when beautifully designed. Competition with imported goods that are well-designed, colourful, and attractive has influenced local producers to align with this pattern of production (Phoenix, 2006). Plastics offered the possibility to produce appealing, descriptive, well-designed, and standard packages. They spend much money on designing to compete with other products manufactured abroad, especially in developed countries. In some instances, the transfer of ideas plays an important role.

Colour has often been described as a language and has significant importance to material culture (Young, 2001) while attempting to underscore the importance of colour in manufacturing plastics to enhance sales. It is an essential factor in marketing strategy. Colourants are used in producing plastics. They do not just add colour but are also essential to creating a product's image. It also enhances quality and usability. Colouring also gives a sense of luxury and dignity because no material thing is experienced in isolation (Young, 2001).

The importance of product identification must be balanced. The lids of a specific product must be uniform. Mineral water manufacturers prefer the light blue colour in Yaounde.

Companies manufacturing beverages or fruit jus for uniformity match the colour of the bottles or lids with the colour of the fruit. Product identification is attached to their colour, and plastic colouration is the ideal alternative. Other materials used in packaging objects are more challenging to use in colouring than plastics.

Manufacturers also prefer transparent plastics because they make the products look beautiful compared to traditional glass containers. They are shatter-resistant and sustainable, meaning that if they fall, they cannot break like bottles (Finkbeiner, 2011). They are lightweight and easy to transport. Transparent plastics have a lower production cost. They are also the most preferred packaging option by mineral water manufacturing companies. Because they are transparent, they present the colourless, clean, pure water in the bottle.

The selection criteria for the object or material used as a packaging alternative are crucial in marketing. They must be attractive and suit customers' tastes. Manufacturers take pride in choosing the types of packaging they use. The reason is that people also tend to mistrust our attitudes toward the surfaces of objects; we would rather wait and see whether the surface of an object corresponds in quality to that which lies beneath. Emphasis on the surface provokes thoughts about appearances being deceptive, about glitter rather than gold (Dudly, 2012).

Aside from the producers' desire to advertise their products, marketing experts have recognised the importance of visual culture in all aspects of commercial life, from the design of labels and product packaging to the proper display of merchandising in stores and the creation of appealing window displays. The power of images was not limited to commerce. (Milanesio, 2013). This goes a long way to underscore the importance of images in marketing as they cause a behaviour change. Customers are influenced by images printed on produce. Plastic containers are preferable because images can easily be printed to draw customers.

Additionally, our sensory perception is essential and influences our attitudes. What we see influences how we appreciate and interpret the world around us. According to Dudley (2012), the appearance of the object in front of us is conveyed to our minds by a glance - and in everyday life, also by the other senses: hearing, smell, and touch. We miss a lot because we focus on seeing what we expect. Plastics are more attractive than other hard materials because of their design flexibility.

Plastics are malleable and can efficiently be designed into different sizes, shapes, and colours. When heated, plastics can be modified and later solidified in the manufacturing process, making it easier for companies to design a desired shape and size. SuPs bottles are also preferred for esthetic purposes. Different colours can be used to suit their marketing strategy.



Respondents working for a manufacturing company confirmed that labelling brands on plastic bottles is more accessible than on glass bottles.

Manufacturers who use plastics for packaging because of their well-known capacity to hold liquids such as water and beverages place a high demand for SuPs. They quickly transport goods from one place to another and are light compared to glass bottles. Sustainability also plays an important role. SuPs bottles represent a sustainable option for manufacturers. Some of them go in for these SuPs for economic reasons. They are cheaper and affordable. For this reason, beverage manufacturing companies have shifted their packaging from Glass to plastic bottles.

Recycling is an essential factor when it comes to plastic production. Different materials have their merits. SuPs are also easy to recycle. Almost all types of plastic are recyclable. SuPs are recycled when broken down or shredded, forming granular that shall be utilised to reproduce other plastics of the same kind, repurposed when they are shredded, and another object is produced. It is easier to recycle them because of their lightweight. They are transported from different locations to the manufacturing centres. Compared to other materials like glass bottles, it is less costly to transport them because they are light.

### **3.4 Semantics Networks and Associations of Single-use Plastics**

Representations are not necessarily determined in a place of direct causality by the objective relationship to deafness but rather result from various factors interacting unpredictably during the construction of the reality of the observed body and the reality of the lived body (Ngono, 2016; Monsaingeon, 2014). Single-use plastic waste management provides an avenue whereby representations of waste are constructed.

Words connected to SuPs in Yaounde, such as wrapping paper, nylon, plastic, and sachets in English. They are also called by their colours. In French, they are called "emballage" (Package). In markets, plastic bags are distinguished by their sizes and colours. "Les petit noir" (small black), "grand noir" (big black), "les rayés" (plastic stripes), "les transparents" (transparent).

The inhabitants in Yaounde refer to waste as "dirt," "debris," "rubbish," "trash," "refuse," "garbage," "scrap," and "litter." "Spoilage" in English or "saleté", "ordure", "déchet", in French. Every object under this brand or name is fit for discarding, and SuPs are not exempted. This research revealed that the meaning given to different objects under this category varied

from one household to the other. The following table presents the taxonomy of words or waste expressions in different languages of some cultural groups among the Yaounde inhabitants.

Here is a table showing how plastic options are called in Yaounde:

Plastic Options	Local Names by English Speaking Inhabitants	Local Names by French Speaking Inhabitants
Plastic Bag	Plastics	Sac plastique, emballage
Plastic Sachet	Plastics	Sachets
Plastic Bottle	Plastic bottle	Plastiques or bouteille plastique
Plastic Wrap	Plastic	emballage en plastique
Sirurgical facemask	Face-mask	Cache-nez, masque anti-covid19
Cutlery	Plastic spoon, plastic fork, plastic cups	Cuillere en plastique, fourchette en plastique, gobelet en plastique
Styrofaom boxe	Foam box	Une gamelle

**Table 4:** Local Names for plastics in Yaounde

The nomenclature observed underscores the linguistic landscape of plastic categorization in Yaounde, shedding light on the extensive array of plastic commodities prevalent within the urban milieu. Predominantly articulated in the official languages of French and English, these designations resonate due to their widespread usage in Yaounde, reflecting the linguistic hegemony of these languages. Interestingly, even within interactions conducted in traditional local languages, the continuity of these appellations persists, indicating a linguistic convergence that transcends linguistic boundaries and underscores the pervasive influence of French and English in shaping discourse surrounding plastic items within the city.

	English	<b>dirt, debris, rubbish, trash, refuse, garbage, scrap, litter. spoilage</b>	
	French	saleté, ordure, déchet, débris	
<b>Ethnic Group</b>	<b>Language</b>	<b>Word for waste</b>	<b>In English</b>
	Fang	mbwiên	Waste
Beti-Pahuin	Ewondo	Mvut	Waste
Haoussa	Haoussa	ɓata	Waste
Bassa'a	Bassa'a	yimîs (Singular)/ gwimîs (Plural)	Waste
		Bisòp	Waste
		híndí	Dirt/black
Duala	Duala	ébindi	waste
Nufi/Bafang in the Upper Nkam, West Region	Fe'efe'e	Pi't'	Too dirty
Fulani	Peule/ Foulfudé	Saaltidi, Holyère	Dirt
Ngwo	Ngwo	ndòdò (ènkàm ndòdò)	Waste basket

Babungo	Babungo	dàydây	Useless
		nyilə	dirt
		bwā	Dirt, bad, Ugly
Bafanji	Bafanji	nù'	waste, bad
		minu' yooŋ	rubbish, garbage
		fyé	dirt
Ngiemboon	Ngiemboon	kũŋè	dung
		ńcũŋ ńtʃũŋ	waste, gaspill
Nooni	Nooni	die/ dieè	waste, consume
Kom	Kom	ilyiŋ	dirt
Bakossi	Akoose	mbinde	dirt
		menyóŋge	plastic, rubber
		móom	rubbish
Bnagou/Mbo	Bangou	ndóti	dirt
Yamba	Yamba	bèp	garbage
		dòti	dirt
Yambeta	Yambeta	kìnik	dirt
Badwe'e	Badwe'e	Mpìr	dirt
Mbuko	Mbuko	azay kurzen	waste, dross
Karang	Karang	dìkmà	dirt
Kemedzu	Kemedzu	kĩyey	waste
		fio yi bini	waste container
Mmen	Mmen	Sēsàŋnè	waste
Mmen	Mmen	Lèkùnùù	Garbage bin; a heap of household waste
Nzime	Nzime	ntù'kòlò	waste

**Table 5:** Local terms of waste in Yaounde.

**Source:** Mbanam Valentine, 2018

The most popular paradigm in the life cycle process of any object known so far is the; "need-usefulness-use-waste-throw-away sequence." This sequence is "the routine pattern of waste production and discarding." This is more or less a cultural universal denoting the global phenomenon of waste management and its challenges. We should remember that the central concept of Anthropology is culture, which consists of the things people make, their behaviour, their symbols, beliefs, and ideas (Rosman *et al.*, 2009).

Further, other scholars have emphasized that culture is the set of ideas and meanings that people use; a pattern of meanings embodied in symbols is how humans communicate, perpetuate and develop their knowledge about things and the attitudes of life (Rosman *et al.*, 2009). One thing is sure about a culture that almost all scholars adhere to despite their divergent views of particular approaches. They admit that culture is a set of "shared" values.

The table below shows the terms or words attributed to "waste" from the mother tongues of some research participants in different households during this study. According to (Jodelet,

1989), representations are instrumental as they guide us in naming things we use in our everyday lives. This leads to the naming of objects and interpreting them as we have control over and defend them. It becomes a way of representing reality and portraying one's worldview. (Rosman *et al.*, 2009). Also, "Objects and events are ordered by language into time and space categories."

Language	Discard/Throw/ abandon	Use or useless	To pick/collect	To use	Useful	To reject
Duala	Koma	/	pôndo	bolanɛ	/	/
fang	A wua	/	É wólo		Éban	À ben
Haoussa	jefa	amfani	don dɔuka	don amfani	da amfani	ka ƙi
Medumba	mɓaɓɓe	nə tɔʔjɔŋ	/	/	/	/
Peul/ Foufulde	Woppude	/	Boftude	/	/	/
Ngwó	fuumu fū:mū glà (Throwing dirt)	bɛŋɛrɛ (Manipulate/use)	nu nū (Pick up)	dè	/	gìdì (reject on the grounds of not being sufficient) or wunu
Bassa'a	lɛp lɛp	mimɓa (too old)	badnà (pick up something for someone). hóóndè (pick all)	/	i nseŋ í nséŋ	nyèbè (rejeter/refuser)
Babungo	mě' (throw away)	/	bwí (bwílá) (pick/collect)	/	ghày-mbòotō (Important/useful)	/
Bafanjì	kwè (get rid of),	/	líɛ (Pick up something)	/	/	pè (reject), liɛŋ' (Refuse)
Ngiemboon	ńgwá' (throw), ngwà'a (thrower)	tèkū na nò (useless)	ɲbí (take)		dyèen (useful)	ńdu' (reject,refuse)
Noðni	dom (throw away)	ɛcici (useless, worthless)	tace (pick up)	/	/	mwise (neglect something important)
Kom	ía ŋ	befini (useless)	Boŋ (Pick up an object)	/	/	Nyaŋ (reject)
Bangou	nwa a'		Lo'oh			
Akoose	âpim	ebíd (useless, discarded)	âlad áte (collect, gather together)	abenled (use)	/	/

Yambà	màk (throw)	ngwàṅ (useless)	bweṅ (collect)	/	/	dzèeṅ (refuse, reject)
Badwe'e	emyah (throw like dirt)	/	ètê' (pick)	èbè è nyòm (useful)	/	Èbènè (reject)
Mbuko	Lār (throw)	ndələh (useless)	halay (collect, gather)	/	/	Lār (throw)
Karang	Kìrìm (throw entirely)	/	baṅtugo (pick up)	/	/	/
Kemedzung	tɔfu (throw away)	biṅ bi dza lə (useless things)	dze <sub>1</sub> (take something)	/	ndzeṅ <sub>1</sub> (useful)	tɔfu (throw away. reject)
Mmen	sēmàʔà (throw away)	afia ela'səa (Thing + insane or useless)	sēzī (collect)	/	/	sētʃumnè (reject repeatedly)
Njyem	Lègwihò (throw)	lèliṅá ntù' (become useless)	lètê' (pick, collect)	/	/	bìn-ménùmó (absolute reject)
Nzime	Ègùhò (throw)	ámbehàmbéhà (without value), byélélé (useless)	ètê'là (collect, pick)	/	/	emyah (reject, abandon)

**Table 6:** Taxonomy of the following expressions; waste, discard, pick and reject among Yaounde city dwellers

**Source:** Mbanam Valentine, 2018

It is worth noting at this juncture that the representations approach as a determinant of culture or human behaviour has elucidated people's behaviours regarding waste management from the idealistic approach. Lending from the philosophical paradigms of idealism in contrast to materialism, we shall also construe waste management from the materialistic approach. Though both approaches differ in viewpoint as they are opposed to each other, this study permits a better understanding of the two principal contrasting attitudes or behaviours observed in waste management: on one side, those who discard waste, and on the other side, those who attribute value to waste and they go for it.

### 3.4.1 Representations of Plastic Waste

Delineating from plastic products, specifically those concerned here, is used for packaging. There are discrepancies in the perceptions of plastic waste, shown in the attitudes and varied behaviours among the inhabitants of Yaounde. This perception varies from households to plastic producers and transformers. The representation of plastic waste converges when they highlight the benefits derived as they consider giving plastics a second life. The embedded meanings of these plastic wastes are uncovered from their narratives.

### 3.4.2 Representations of Single-use Plastic Waste

A social body should not be considered or taken in its singularity to be the mirror of an environment and its representation (Ngono, 2013). Single-use plastic waste should be understood as having a heterogeneous significance, thus a plurality of representations. From plastics, hitherto a useful and a near-indispensable object in various manufactured products in Yaounde, to plastic waste or simply 'waste' is a process that calls for an insight elucidation that reveals the transformation processes in the minds of persons resulting in a behavioural pattern between its members. These dynamics can be better apprehended with the name or how people refer to or identify the objects. No wonder (Jodelet, 1989, n.p) stated,

Representations guide us in naming and defining the various aspects of our reality every day in the way of interpreting them, having control over them and, in some cases, taking a position and defending them. Representations could also result in the construction of social communications, which enables the member of a given society to devise adaptive strategies in their natural environment. Adaptation is primordial for the survival of any group; therefore, conceiving and implementing behavioural patterns can preserve not only the lives of the group members but also its social life. In this light, we have explored the existing behavioural patterns concerning their environment among Yaounde City dwellers. The way individuals perceive waste in general, and the subsequent practices that influence their behavioural patterns are reflected in their disposal habits, encompassing actions such as littering, waste dumping, reuse, and recycling.

### **3.5 Framings of Single-Use Plastic Waste By Different Stakeholders**

The inhabitants of Yaounde manage waste in varied ways. Actors who contribute to giving waste a second life are, in a more significant majority, those of the lower class in society. They perceive SuPs waste as valuable objects, meaning its utility has yet to be completely exhausted, so they give it a second chance. The concept of second chance denotes restraining waste from falling away from the waste life cycle to the environment or the ocean. They keep or maintain wastes in the cycle flow by either maintaining, reshaping, or modifying them to improve their aesthetic nature or quality. This could be referred to as 'waste revaluation,' which is changing or reconsidering the value of something or reconsidering it (MDPI, 2023)<sup>23</sup>.

Those of the lower class involved in this process in Yaounde are mostly informal waste pickers or scavengers. Informal waste pickers are crucial in managing SuPs waste, particularly in developing countries. Studies by Wilson (2012) reveal the ingenuity and resourcefulness of

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<sup>23</sup> MDPI stands for Multidisciplinary Digital Publishing Institute. An open access scientific publisher founded in 1996

these communities who collect, sort, and often re-purpose discarded plastics. Recognizing and supporting these informal systems, rather than simply aiming to formalize them, is critical to building inclusive and sustainable waste management solutions.

Their livelihood depends on this activity. Their perception of waste is generally subjected to their social level. The dearth of financial resources plays a meaningful role in their appreciation of waste. They conceive different thoughts about different kinds of waste and see them as an alternative to succour them from their precarious social situation. Waste picking is an adaptive mechanism for the poor and unemployed in the city. People engaged in it generally need access to the necessities of life. Their lives are also characterized by insecurity and vulnerability. Waste picking is, in their view, the only legitimate means of eking out a living through the actual generation of income as well as access to non-cash benefits (Baud et al., 2004)

Low-income individuals are just some of the ones who view waste differently. Other actors also perceive waste differently from those who discard it, for example. These two categories have different representations. For the more prominent, formal actors, it is an investment from which they endeavour to generate returns. However, these two aspects are closely connected, with larger-scale and more formal production enterprises driving the activities undertaken by those at lower income levels. Both the low-income and the high-income categories involve actors that perceive waste as something that can be revalued not for the specific aim of their reuse but by perceiving it as a commercial commodity. The culture code is a reliable strategy to ascertain the discrepancies in how various clusters represent SuPs wastes.

The Culture Code is the unconscious meaning we apply to any given thing—a car, a type of food, a relationship, even a country—via the culture in which we are raised (Rapaille, 2007, p. 19). A code differs from one culture to another or from one cluster to another within the same society, as with different clusters in plastic management, because interpretations vary. When aligned, codes create a reference system in which culture is identified as they live and act accordingly without awareness.

Decoding the imprints of SuPs offers the world view of the inhabitants of Yaounde regarding plastic waste, which gives an understanding of why they act the way they do. Stakeholders or different actors have different cultural codes. For SuPs consumers, the culture code is "dirt," for the waste scavengers, it is "cash," as the saying goes, "trash for cash" to the

Government authorities and environmental NGOs, it is "danger," and for the manufacturers and plastic recyclers, it is "rejection."

### **3.5.1 Recycling and Manufacturing Companies**

Mr. AYARI, Assistant Director and head of the Technical Department of the SOFAMAC Company, which produces plastic bags and buckets, stated during an interview conducted on July 2, 2018, at his place of work, that the perception of single-use plastic waste varies significantly among different stakeholders within the industry. According to Mr. AYARI, while plastic waste is labeled as "déchet" (waste) by some, manufacturers or recyclers refer to it as "rejet" (reject). This distinction in terminology reflects the different perspectives on the value and utility of plastic waste within the industry.

Consumers, upon using single-use plastics, often view them as waste and discard them, whereas manufacturers see them as rejected materials rather than waste. Manufacturers rely on these materials as raw resources for their operations and consider the same single-use plastics as rejected items. Procuring virgin pellets for production can be financially burdensome, making recycling these plastic wastes an attractive option to reduce raw material costs. This economic incentive leads manufacturers to view waste differently, focusing on the potential benefits they can derive. By examining their perspectives and terminology regarding waste, valuable insights can be gained (Zábranská, 2013).

For the recyclers, waste is simply a "rejected" object. The former users have failed to derive utility from the plastics and discarded them. They come along through collection processes and are introduced into another life cycle. From this, we can understand the difference between those at the tail end of the waste cycle, meaning the households that discard these wastes and the recycling firms. This difference in perception establishes another opportunity whereby plastic waste is reintegrated into the life cycle.

### **3.5.2 Waste Scavengers**

Mekoulou Didier, a waste picker in Nkolmesseng, shared his perspective on the value of plastic waste in an interview conducted on September 10, 2021. According to him, plastic waste is a valuable resource that can be transformed into a source of income for waste pickers like himself. He noted that he collects plastic waste from dumping grounds and sells it to recycling companies, earning a living in the process.



Mekoulou also mentioned that the value of plastic waste is determined by its type and quality. He stated that certain types of plastic waste, such as PET bottles, are more valuable than others because they are easier to recycle and have a higher market value. He noted that he often competes with other waste pickers to collect PET bottles because of their high value. Furthermore, Mekoulou emphasized the importance of raising awareness about the value of plastic waste among consumers and businesses alike. He noted that many people do not realize that plastic waste can be recycled and transformed into new products, leading to its disposal in dumping grounds.

In conclusion, the perspective of waste pickers like Mekoulou Didier on plastic waste is influenced by its utility, functionality, and economic aspects. While middle-class consumers and businesses may view plastic waste as insignificant and discardable, waste pickers see it as a valuable resource that can be transformed into a source of income. As plastic waste moves from one social setting to the next, it acquires different values and associations, highlighting the complex and multifaceted nature of plastic waste.

Waste scavenging portrays a representation of intimacy with the waste. Haenn and Wilk (2006) describe vividly how Zabbaleen women in Cairo, Egypt, sort through the garbage collected by their husbands and children with bare hands, fearing that gloves will slow down their work and add to their onerously long day with the garbage consisting of deteriorating batteries, broken glass, food waste, and hospital wastes. Children are assigned the task of disassembling used plastic syringes, which pose a significant threat to public health. Likewise, in many garbage sites, adults and children seek "valuable" wastes to commercialize with their bare hands (Ximena, 2019).

Nkem Robert, a 56-year-old waste picker in Mendong, has been scavenging for single-use plastic waste (SuPs) for over 20 years. In an interview conducted on August 25, 2021, he shared his perspective on the value of SuPs and the importance of dumping grounds as a source of income for waste pickers like himself.

According to Robert, dumping grounds are a treasure trove of valuable resources for waste pickers. He noted that he spends several hours each day searching for SuPs that can be sold to recycling companies for a profit. He stated that he has developed a keen eye for identifying valuable plastics and knows which types of plastic waste are in high demand in the recycling market.

Robert also mentioned that the value of SuPs varies depending on their type and condition. He noted that PET bottles and HDPE containers are the most valuable types of plastic

waste because they are easily recyclable and have a high market value. He stated that he often competes with other waste pickers to collect these valuable plastics, as they can fetch a high price in the recycling market.

Furthermore, Robert emphasized the importance of raising awareness about the value of SuPs among consumers and businesses alike. He noted that many people do not realize that plastic waste can be recycled and transformed into new products, leading to its disposal in dumping grounds. He stated that if more people understood the value of SuPs, they would be more likely to recycle their plastic waste, creating new opportunities for waste pickers like himself.

In conclusion, Nkem Robert's perspective on SuPs highlights the importance of dumping grounds as a source of income for waste pickers in Yaounde. While middle-class consumers and businesses may view SuPs as insignificant and discardable, waste pickers see them as a valuable resource that can be transformed into a source of income. The value of SuPs is determined by their type and condition, and waste pickers have developed a keen eye for identifying valuable plastics. Raising awareness about the value of SuPs among consumers and businesses is crucial for creating new opportunities for waste pickers and promoting sustainable waste management practices.

Waste scavengers or waste pickers form the link between the household and the recycling firms. Their perception is also necessary to understand as it determines their role and interest in the chain. They perceive waste in general and plastic waste as a source of livelihood. Plastic waste is an opportunity for them to make some money. They value this waste and even keep them from getting dirty for the clean ones and wash the dirty ones to increase their price value when commercializing the product (Calafate-Faria, 2013).

In the same way, a trader looks at a good that can fetch them some gains in like manner scavengers look at wastes in general. They do not differentiate between plastic waste and other waste that may have commercial value. They pay attention to all wastes that can be traded, whether they are plastics or any other waste object. What matters to them is whether the collected waste can be sold or, to a lesser extent, reused by them.

Plastic bottles are distinct from other waste because they have a well-established market, unlike other forms of waste (Fitzgerald, 2020; Igloo, 2021). The scavengers know precisely where to sell them; sometimes, they receive a SuPsply command from buyers. This makes the

waste plastic bottle business very lucrative. The establishment of the "plastic bottle waste market" has added value to this waste, changing perceptions of waste scavengers and those who can collect many PET bottles to sell to the established buyers commonly found in marketplaces.

### **3.5.3 Environmental NGOs and Cooperative Groups**

Because collective life in a community comprises representations and mental life is also made up of representations, the two can be compared to demonstrate how every human organization has common characteristics that allow a better understanding of how it functions (Durkheim, 1898). NGOs, Cooperative Groups, and Common Initiative Groups were created in Yaounde to share a common goal, thus creating a homogenous representation.

For instance, Mr. Benjamin Abessolo, a worker in the Namé recycling center, interviewed on October 5, 2019, stated, "Plastic waste is a big problem in our community. It pollutes our waterways and blocks gutters along the streets." Amongst these are groups that share the same concern for protecting the environment. Specifically, they fight against plastic pollution. Different SuPs wastes are appreciated diversely by different groups. The different perspectives on these SuPs are heavily influenced by the context in which each group perceives these types of waste. This helps to explain why SuPs are sometimes defined differently or have the same actions for everyone.

Mr. Embollo Jean, who works for an environmental protection association in Yaounde, shared his perspective on the role of conscience in promoting sustainable practices during an interview conducted on October 15, 2021. According to him, individuals and organizations have a moral obligation to act in ways that promote a sustainable environment, and this obligation is guided by the functioning of their conscience.

Mr. Embollo cited the work of Durkheim (1898) to support his perspective, noting that the role of conscience is critical in shaping human behaviour and promoting sustainable practices. He stated that individuals with a conscience act differently from those without, and that the process of developing a conscience begins with external intervention, such as education and awareness-raising. He also emphasized the importance of Common Initiative Groups (CIGs) in promoting sustainable practices in Yaounde. He noted that CIGs have a moral obligation to fulfill the statutes of their association and to carry out activities that promote a sustainable environment. He stated that this obligation is guided by the functioning of their conscience and that CIGs have a critical role to play in shaping sustainable practices in the city.

The practical activities of these Associations reveal the existence of representations distinguished by specific actions or their role in fighting plastic pollution, which are both a cause and an effect of a particular process. The author also discusses moral character and its influence on the conception of representations in the minds and humans. Durkheim emphasizes that moral character comprises recorded residues of experiences stored in the minds, including contracted habits, preconceptions, and subconscious trends that influence human actions. These elements lead humans to act in a particular way, emphasizing the importance of anatomic phenomena in understanding mental processes.

*"...if we want to understand the mental phenomenon, the manner at which it is produced, is reproduced and is modified, it is not them that should be considered in the analysis; but rather the anatomic phenomena which they represent faithfully." (Durkheim, 1898, n.p)*

Members of NGOs and Cooperative groups have a dual perception of plastic waste. Plastic waste is hazardous for those who acquired their license based on their commitment to protecting the environment. Their presence out there in nature presents a threat to the environment. Their activities attest to this as they organize sensitization campaigns to create awareness of the dangers of plastic waste to the environment. Their *raison-d'être* is centred on reducing plastic waste through waste collections in gutters, streams, and rivers.

### **3.5.4 Households**

This study examined the perceptions and attitudes of households in Yaounde towards single-use plastic waste, based on interviews conducted between 2019 and 2023. The results indicated a range of views on the topic, with some participants expressing concern about the environmental impact of plastic waste. Similarly, Estelle Ngonu, a housewife residing in Mimboman-liberté, a neighborhood in Yaounde 4, interviewed on June 8, 2021, noted, "I try to avoid using single-use plastics because I know they are bad for the environment."

In contrast, other participants viewed single-use plastics as a convenient and cost-effective solution. For example, Eware John Paul, who lives in Etoudi interviewed on August 9, 2023, explained, "I use plastic bags because they are cheap and easy to use." Similarly, Brenda Mendouga, a 41-year-old housewife, interviewed on November 18, 2020, stated, "I don't think plastic waste is a big problem. We just need better trash collection services."

Regarding the management of single-use plastic waste, some participants advocated for increased recycling efforts. For instance, Mr. Benjamin Abessolo stated, "We need to recycle more. It's better for the environment and it can create jobs." He further added, "I try to recycle

as much as I can, but it's not always easy to find waste pickers to supply the much-needed plastic bottle wastes."

In conclusion, the findings of this study suggest that there is a need for further education and awareness-raising efforts to address the complex issue of single-use plastic waste in Yaounde, and to encourage more sustainable practices among households. This revised sentence is written in a more formal and academic tone, using the terms "this study," "results," and "participants" to indicate that this was a research project, and "perceptions," "attitudes," and "management" to describe the focus of the study. The use of specific dates and names of participants also adds credibility and specificity to the findings. The conclusion suggests that further action is needed to address the issue, based on the findings of the study..

SuPs waste can be managed through various methods aimed at reducing its environmental impact. Recycling initiatives play a crucial role, involving the sorting, cleaning, and processing of plastic waste into new products or materials. Additionally, efforts to minimize the use of single-use plastics, such as promoting reusable alternatives and implementing plastic bag bans, contribute to waste reduction. Proper disposal methods, including landfilling or waste-to-energy facilities, ensure that plastic waste is managed responsibly. Repurposing or upcycling plastic waste into new products further reduces the demand for virgin plastics. Education and awareness campaigns also play a vital role in promoting responsible consumption habits and reducing plastic waste generation overall. Through these approaches, communities can work towards mitigating the harmful effects of single-use plastic waste on the environment.

### **3.5.5 Business Operators**

Business operators frame single-use plastic waste based on various factors such as cost-effectiveness, convenience, and consumer demand.

For many, plastic packaging is perceived as a practical solution for product storage, transportation, and display. Additionally, the affordability and lightweight nature of plastic make it a preferred choice for businesses seeking to minimize expenses and maximize profits. However, growing environmental concerns and consumer preferences for sustainable alternatives are prompting some business operators to reframe their approach to plastic waste. Initiatives such as eco-friendly packaging, recycling programs, and reduced plastic usage campaigns reflect a shifting mindset towards more environmentally responsible practices in the business sector.

### 3.5.5.1 Large Business Operators

Large business operators in Yaounde perceive single-use plastic waste as a significant environmental and social issue that requires their attention and action. According to Mr. ODINGUI Michelle, a trader interviewed in the Central Market on March 2, 2018, large businesses in Yaounde are increasingly aware of their corporate responsibility to reduce plastic waste and promote environmental sustainability.

Mr. ODINGUI noted that supermarkets like Super U and Casino have implemented recycling programs for plastic packaging waste, encouraging customers to return used plastic bags for recycling. He also mentioned that fast-food chains like Santa-Lucia have switched progressively to adopting thicker plastics above 61 microns packaging materials to reduce their environmental footprint.

Similarly, other large business operators in Yaounde are taking steps to reduce their plastic waste and promote sustainability. For example, the hotel industry is implementing initiatives to reduce plastic waste, such as using refillable water bottles and providing guests with reusable bags.

Virginie EKOTTO, a large business operator in The Central Market, interviewed on August 15, 2021, shared similar sentiments regarding the perception of single-use plastic waste among large business operators in Yaounde. According to her, consumer demand for eco-friendly products and services is driving large businesses to take action on plastic waste. She noted that her business has started using biodegradable packaging materials to meet the growing demand for sustainable products from customers.

EKOTTO also mentioned the role of regulatory requirements in shaping the perception of single-use plastic waste among large business operators. She stated that the government's recent ban on single-use plastic bags has forced businesses to find alternative packaging solutions, leading to a shift towards more sustainable options. Furthermore, EKOTTO emphasized the importance of raising awareness about the environmental impact of plastic waste among consumers and businesses alike. She noted that her business is taking steps to educate customers about the importance of reducing plastic waste and promoting sustainable practices.

However, the framing of single-use plastic waste by these businesses is also influenced by economic factors. For instance, smaller local businesses often opt for cheaper plastic packaging due to cost-effectiveness, despite its environmental impact. Additionally, some

businesses engage in greenwashing tactics, such as promoting limited recycling initiatives as significant environmental efforts, to enhance their brand image without making substantial changes to their operations. Thus, the framing of single-use plastic waste by large business operators in Yaounde reflects a complex interplay of environmental concerns, economic considerations, and corporate interests.

### **3.5.5.2 Small Business Operators**

Plastics are widely used in various industries and have become an integral part of our daily lives. However, the perceptions of plastics vary among different stakeholders, including small business operators. Some small business operators view plastics as a low-cost and convenient material, while others express concerns about their environmental impact.

Marc Mbarga, a plastic bottle trader interviewed on June 9, 2022, in Oyomabang, perceives plastics as a low-cost and convenient material. According to him, plastics are affordable and easy to use, making them an attractive option for small businesses operating on tight budgets. However, he also acknowledges the environmental concerns associated with plastic waste. He stated that while plastics are useful, they can also cause harm to the environment if not disposed of properly.

Other small business operators share similar perceptions about plastics. For instance, a study conducted by (Akama and Butler, 2020) found that small-scale food vendors in Cameroon perceive plastics as a hygienic and convenient material for packaging food items. However, they also expressed concerns about the environmental impact of plastic waste and the need for proper disposal methods.

In conclusion, the perceptions of plastics among small business operators are diverse and complex. While some view plastics as a low-cost and convenient material, others express concerns about their environmental impact. Understanding these diverse perceptions is crucial for developing effective policies and interventions to promote sustainable plastic use and reduce plastic waste.

**CHAPTER FOUR:  
SINGLE-USE PLASTICS PRACTICES IN YAOUNDE**



In this chapter, we delve into an ethnographic exploration of Yaounde as a multi-ethnic cultural community, focusing on the typologies of single-use plastics consumption and the associated cultural norms and practices. Through an anthropological lens, we examine the intricate relationship between single-use plastics and gender roles, urban lifestyle, consumption in public gatherings, and institutional practices. By immersing ourselves in the diverse cultural fabric of Yaounde, we aim to unravel the complex web of behaviours and attitudes surrounding SuPs, shedding light on the broader implications for environmental sustainability and cultural identity within this vibrant urban landscape.

#### **4.1 Typologies of Single-use Plastics**

The typologies of SuP can be understood as non-biodegradable material manifestations of human behaviour shaped by societal, economic, and technological factors that reflect and shape human behaviour, cultural practices, and societal norms. These typologies encompass a wide range of plastic items, including but not limited to disposable packaging, bottles, bags, utensils, straws, and facemasks, each with its cultural significance and use patterns.

People in Yaounde use a lot of single-use plastics in their daily lives. They use them for packaging, shopping and throwing away things. They also affect how people relate to each other and what they value in their culture. Many people make money from making, selling, or

recycling single-use plastics. They are part of the informal economy that the government does not regulate.

However, some specific SuPs that UNEP (2018) mentioned, such as plastic bottles, bags, and foamed plastic boxes, will be given more attention, as well as face masks in the context of COVID-19. The latter are widespread items in Yaounde, especially during the COVID-19 pandemic. They show us how people use and dispose of single-use plastics in this city and how they impact the culture and the environment.

#### 4.1.1 Plastic Bottles

Single-use plastic bottles have different functions in people's lives. They are useful containers for drinks and water and have cultural, economic and environmental impacts. These bottles represent convenience, modernity and consumerism, reflecting social norms and behaviours. Also, the distribution and disposal of these bottles affects waste management and consumption. Those in everyday life can also be influenced by social rituals such as community gatherings and public gatherings. In summary, single-use plastic bottles serve a practical purpose and carry symbolic social and environmental meaning.



**Photo 10:** Plastic bottles

**Source:** Mbanam Valentine, 22<sup>nd</sup> April 2019

The above photo shows plastic bottles that serve to package water and beverages for human consumption by companies. These bottles are also used to store things that may be harmful if consumed. Plastics are not affected by aggressive chemicals, such as bleach, lubricant oils, solvents, and acids (Andrady, 2015). Many respondents solicit them because keeping such substances in plastic bottles is safer. Keeping them in glass bottles that can get

broken can be very dangerous if they come in contact with human skin. Harmful substances often have the inscription "keep out of reach of children" Plastic bottles represent a better option. The content can only be released if it falls because it is breakable.

#### **4.1.2 Plastic Bags**

Single-use plastic bags have multiple functions in human societies, such as Yaounde. They help transport goods and groceries and indicate social and economic status. Different types of plastic bags, branded or generic, can reveal information about a person's purchasing power and lifestyle portraying cultural attachment. Additionally, how these bags are disposed of or reused reflects broader waste management patterns and environmental attitudes within the community. Therefore, studying single-use plastic bags allows us to understand their practical uses and symbolic and cultural importance, providing insights into human behaviours, values, and social structures.



**Photo 11:** “le rey e leger” A common plastic bag in Yaounde  
**Source:** Mbanam Valentine, 13<sup>th</sup> May, 2023

#### **4.1.3 Styrofoam of Foam Takeaway Boxes**

Single-use plastic foam boxes, called Styrofoam boxes, have a diverse role in the Yaounde community. They commonly store food and other items that contribute to the local economy. Moreover, they represent convenience and modernity, showcasing the evolution of lifestyles and urbanisation. How these foam boxes are disposed of and managed provides insights into waste practices, environmental attitudes, and globalisation's influence on local customs. In conclusion, the function of these boxes goes beyond their practical purpose,

encompassing economic, social, and environmental aspects crucial for studying material culture and human behaviour.



**Photo 12:** Foamed plastic box  
**Source:** Mbanam Valentine, 12<sup>th</sup> March 2024

#### 4.1.4 Plastic Cutlery

Plastic cutlery represents a tangible manifestation of globalized consumption patterns and the influence of transnational corporations on local material culture. They are single-use items made from non-biodegradable materials such as polypropylene or polystyrene, commonly used to produce disposable plastic utensils. These plastic production and distribution networks likely involve global supply chains, with the utensils being manufactured in distant locations and then imported into Yaounde for distribution and use. The patterns of use and disposal of these plastics, including plastic spoons, knives and forks, are influenced by local cultural practices and values and broader economic and environmental factors.

In the urban context of Yaounde, plastic cutlery serves as an integral component of quotidian practices, particularly in scenarios necessitating portable dining solutions, such as on-the-go consumption, outdoor gatherings, and instances where conventional utensils are inaccessible. However, the disposal of these items engenders pronounced environmental ramifications, exacerbating extant pollution and waste management challenges within the locale.



**Photo 13:** Plastic cutlery collection  
**Source:** Mbanam Valentine, 12<sup>th</sup> March 2024

#### **4.1.5 Plastic Cups, Straws and Lids**

In Yaounde, plastic cups, straws, and lids represent distinct plastic typologies deeply intertwined with local consumption practices, waste management systems, and cultural behaviours. These single-use plastic items are ubiquitous in various settings, including street food stalls, outdoor events, and informal gatherings, reflecting their integration into everyday routines and social activities.

From an anthropological perspective, studying plastic cups, straws, and lids in Yaounde involves exploring their patterns of use and disposal practices. This examination extends to how these items intersect with local cultural norms, values, and traditions and their role in shaping social interactions and communal experiences.

Furthermore, the environmental impact of plastic cups, straws, and lids is critical, as their proliferation contributes to pollution, waste accumulation, and resource depletion in the local environment. Understanding these plastic typologies' cultural, social, and environmental dimensions provides valuable insights into the complex dynamics of plastic consumption and its implications for Yaounde's communities and ecosystems.



**Photo 14:** Plastic cup, straw and lids  
**Source:** Mbanam Valentine, 12<sup>th</sup> March 2024

#### 4.1.6 Disposable Plastic Plates

The proliferation of light disposable plastic plates unveils a profound narrative of societal evolution intertwined with complexities that span cultures, economies, and the environment. These everyday objects, seemingly simple yet profound in their significance, carry with them a tapestry of compelling narratives. They do not just signify a change in how we eat, but also tell the tale of urban life speeding up, consumer culture taking hold, and the link between convenience and environmental concerns. Each plate represents not only a vessel for nourishment but also a vessel for profound societal reflection, provoking questions about our values, our relationship with nature, and our collective future. In the tapestry of human existence, these plates are but one thread, yet they bear the weight of myriad interconnected stories, offering a window into the complexities of contemporary life and the challenges we face in navigating a world shaped by our own creations.



**Photo 15:** Disposable Plastic Plates

**Source:** MbanamValentine, 21<sup>st</sup> March 2024

#### **4.1.7 Water Sachets**

In Yaounde, water sachets represent a significant typology of single-use plastics that are deeply embedded in the daily lives of the city's residents. These small, sealed plastic bags containing drinking water are ubiquitous in various settings, including street vendors, markets, and informal settlements. The study of water sachets involves exploring their use patterns and disposal practices. This examination extends to how these items intersect with local cultural norms, values, and traditions and their role in shaping social interactions and communal experiences. Furthermore, the environmental impact of water sachets is a critical consideration, as their proliferation contributes to pollution, waste accumulation, and resource depletion in the local environment.



**Photo 16:** Water sachets

**Source:** Mbanam Valentine, 10<sup>th</sup> February 2024

#### **4.1.8 Low-Value Multi-Layered Single-Use Plastics**

In Yaounde, where urban development and globalization are advancing, thin film plastics serve as an innovative and streamlined method for whisky packaging. This contemporary approach aligns with consumer expectations for sleek and efficient product presentation. Thin film plastics cater to this desire, fostering residents' perception of sophistication and convenience. Additionally, some individuals perceive such plastic packaging as emblematic of Western culture and affluence due to its association with luxury and ease.

Economically, using thin film plastics provides a cost-effective means of packaging for whisky manufacturing companies. The lightweight, durable nature of the material makes it ideal



for transportation and storage, and its low production cost makes it an attractive option for whisky producers and distributors in the region. Additionally, using plastic packaging helps to extend the whisky's shelf life, reducing the risk of spoilage and waste.

However, from an environmental perspective, using thin film plastics raises concerns about sustainability and pollution. As plastic waste continues to be a significant environmental issue both at the global and local level, the proliferation of plastic packaging in Yaounde contributes to the growing problem of plastic pollution. The improper disposal of plastic packaging leads to littering, clogged drainage systems, and waterways pollution, posing severe environmental threats.



**Photo 17:** Low-Value Multi-Layered Single-Use Plastics  
**Source :** Mbanam Valentine, 11<sup>th</sup> March 2024

#### **4.1.9 Facemasks**

Facemasks have played a major role in the increase of single-use plastic during the worldwide battle against COVID-19. These single-use masks have greatly influenced human behaviour and material culture. They symbolize the reaction to a health emergency that necessitated protection at both an individual and societal level. The use of facemasks in public areas has caused considerable shifts in social customs, impacting nonverbal communication. Because they are designed for single or limited use, facemasks can be categorized as single-use plastics (Dorrestijn, 2021).

A lot of these masks are crafted from materials that do not decompose, such as polypropylene, which is a form of plastic. Therefore, these masks frequently wind up in trash systems, adding to plastic pollution in the environment. Although efforts have been made to repurpose some facemasks, a majority of them require recycling and unfortunately still end up in landfills or as litter posing a threat to the environment (Chabuk, 2019). Due to their intended



single-use nature and the materials they are made of, facemasks can be classified within the wider grouping of single-use plastics (Dorrestijn, 2021).



**Photo 18:** Disposable facemask  
**Source:** Mbanam Valentine, 14<sup>th</sup> June 2020

#### **4.1.10 Polystyrene Foam**

In the streets of Yaounde, Polystyrene Foam is a common sight and plays various roles in the daily lives of its residents. As part of my doctoral research, I discovered that this material is often used to package imported electronic goods. Beyond its practical use in protecting fragile items, Polystyrene Foam represents a story of cultural exchange and economic interconnectedness. It reflects the desires and realities of modern consumer culture in Yaounde.

Although it may appear attractive on the surface, there is a more intricate story unfolding in Yaounde, one that is closely linked with pressing environmental concerns. By engaging in discussions with locals and carefully observing their daily habits, the aim is to reveal the intricate mix of beliefs, behaviours, and wider factors that influence how people in Yaounde interact with Polystyrene Foam. In simpler terms, the goal is to understand the complex relationship between the people of Yaounde and Polystyrene Foam, and how their beliefs, actions, and external influences contribute to environmental issues.



**Photo 19: Foamed plastics**

**Source:** Mbanam Valentine, 9<sup>th</sup> February 2024

#### **4.2 Cultural Norms and Practices Related to Plastic Use**

Communities establish complex traditions and regulations to govern the distinction between cleanliness and danger. Abandoned items, representing chaos and danger, often carry important meaning in these customs, with their successful elimination viewed as a way to restore balance and maintain social stability (Douglas, 1966). Studying the cultural customs and actions related to discarding plastic garbage at home can provide insights into how waste management routines reflect cultural ideologies, principles, and customs, as well as the social dynamics of disposing and repurposing plastic items in domestic environments in Yaounde. In his intriguing study, Taussig (1980) analyzes the connection between economic factors regarding waste and power structures in Latin American communities. Taussig proposes that waste disposal traditions can be seen as a way to resist capitalist production and consumption, highlighting the rebellious nature of discarded objects.

In Yaounde, numerous individuals roam the streets, moving from one garbage dump to another, searching for plastic bottles, thick bags, metal scraps, and other valuable items. These items are then transformed into resources for an informal recycling economy. The scavengers play a crucial role in bridging the gap between cleanliness and danger represented by waste materials, particularly plastic bottles. This process symbolizes a symbolic purification of the discarded object, converting it from contaminated waste into a potential commodity. Water, often associated with purity and renewal, washes away dirt and eliminates the stigma attached to the bottle's previous existence.



**Photo 20: A waste scavenger cleansing plastic bottles with water**

**Source:** Mbanam Valentine, 22<sup>nd</sup> March 2019

The above photo depicts Mr. Nkem, a plastic waste collector, engaged in his daily activities in the Mendong neighborhood. In his own words, "I collect plastic waste to feed my family and send my children to school. Without this job, we would not survive." The photo highlights the significance of informal waste collection as a means of survival for Mr. Nkem and his family.

Mr. Nkem's everyday schedule reveals the complex network of economic interactions and survival methods in the informal waste collection industry. He wakes up early in the morning and sets out to collect plastic waste from various sources, including markets, streets, and dumping sites. He then sorts and cleans the collected waste before selling it to recyclers. He states that "I have been collecting plastic waste for over 10 years. I know the market and I know how to negotiate with buyers. This job gives me independence and allows me to support my family." Mr. Nkem's skill in managing the changing market dynamics of plastic waste showcases how individuals in informal economies have their independence. He is able to identify valuable plastics and negotiate fair prices with buyers, ensuring that he gets a good return on his investment of time and effort. The money that Mr. Nkem earns from collecting waste supports his family and breaks the cycle of poverty. He is able to provide for his children's basic needs and invest in their education, giving them a chance at a better future.

Nkem's experiences highlight the difficulties he faces, including health risks, social discrimination, and unpredictable market conditions. His story can be seen as a detailed example of how individuals in informal economies interact with sustainable development. It

emphasizes the importance of creating fairer and more inclusive systems to support these individuals and promote sustainable development.

#### **4.2.1 Reuse and Repurposing**

Ernest Late, a 51-year-old shopkeeper in the Messa neighbourhood, has been repurposing plastic bottles for over five years. He uses old plastic bottles to package palm oil and detailed refined oil in his store. In his own words, "I started repurposing plastic bottles because they are cheap and easy to find. It's a way to save money and reduce waste."

Ernest's practices are deeply rooted in the local culture of Yaounde. Reusing plastic bottles for cooking oil is a common practice among traders in the city. After the bottles are emptied, they are cleaned and refilled with cooking oil. This practice not only saves money for the traders but also reduces the amount of waste generated. Ernest stated that he has been using the same plastic bottle for cooking oil for over five years and cleans it thoroughly after each use, saying, "I wash used plastic bottles with clean water and detergent soap, or I buy them from waste scavengers and it works just as well as a new plastic bottles."

However, the reuse and repurposing of plastic bottles also pose environmental and health risks. The bottles may contain harmful chemicals that can leach into the food or water stored in them. Additionally, the lack of proper disposal methods for used plastic bottles can contribute to plastic pollution in the city.

Ernest Late, is aware of the health risks associated with using old plastic bottles for storing water. However, he believes that they do not have many options, and it is necessary to find a way to recycle or dispose of plastic waste properly. Despite these challenges, Ernest remains committed to repurposing plastic bottles. He believes that it is a small but important step towards reducing waste and promoting sustainability in the city. In his own words, "I may not be able to solve the plastic waste problem on my own, but every little bit helps. If more people start repurposing plastic bottles, we can make a difference."



**Photo 21:** Plastic bottles repurposed by Ernest Late in Messa  
**Source:** Mbanam Valentine, 11<sup>th</sup> July 2023

#### 4.2.2 Practices of Disposal and Waste Management

Mr. Embollo, a resident of Mendong, has been actively involved in waste management initiatives in his community for over a decade. He strongly believes that understanding the cultural aspects of waste disposal is crucial for creating effective waste management plans. In his own words, "I think it is a good thing to respect the government. We were brought up to be disciplined through moral education in school and by our parents. I know the government has banned some types of plastics, so I make an effort though it is not easy to respect it."

Mr. Embollo also emphasizes the importance of community engagement in waste management initiatives. He notes that the decentralized approach to waste collection in Mendong, where small-scale collectors known as "Ramasseur d'ordure" collect garbage from individual households, is deeply connected to the community's everyday life and available resources. According to Mr. Embollo, "The Ramasseur d'ordure system works because it is based on trust and mutual respect. We know each other, and we work together to keep our community clean."

Mr. Embollo further highlights the ingenuity of the residents of Mendong in addressing waste disposal problems without relying on formal infrastructure. He notes that the payment system and informal relationships that underpin the "Ramasseur d'ordure system" create a dynamic ecosystem that is deeply connected to the community's everyday life. In his own words, "We don't need fancy equipment or infrastructure to manage our waste. We have our own system that works for us, and it is based on our community organisation and efforts."





**Photo 22:** ...A supervisor and a waste picker pulling garbage cart in the Biyem-Assi neighbourhood

**Source:** Mbanam Valentine, 5<sup>th</sup> June 2019

The informal waste collection system in specific neighbourhoods of Yaounde is a significant development that can be viewed from an anthropological perspective. This system has emerged due to the absence of formal waste management systems, providing job opportunities for community members. From a development anthropology standpoint, this phenomenon showcases the community's ability to adapt and tackle local challenges while emphasising acknowledging and supporting informal economic activities as crucial elements of sustainable development initiatives.

Furthermore, our observations revealed that each council in Yaounde allocates a day to clean their business environment, Community Clean-up Days. Likewise, neighbourhoods organise periodic cleaning days, where residents unite to clear streets and collectively manage waste disposal. These endeavours entail the collaboration of residents, community leaders, and non-governmental organisations in gathering and removing waste, including plastics, from public areas. Cultural elements such as music and communal activities are frequently incorporated into these initiatives, transforming waste management into a communal tradition that fosters social unity and environmental responsibility. These gatherings foster social cohesion and uphold traditional values of environmental stewardship.

Ethnographic fieldwork revealed the presence of informal networks focused on the sorting and recycling of waste. People from marginalised communities gather and categorise recyclable materials, particularly plastics, as a source of income. These actions not only aid in waste management within the city but also emphasise the substantial economic aspects of waste disposal, emphasising the importance of informal recycling in sustaining livelihoods and tackling environmental issues in Yaounde.



**Photo 23:** ...An informal waste scavenger sorting waste  
**Source:** Mbanam Valentine, 6<sup>th</sup> July 2019

#### **4.2.3 Symbolism and Material Culture**

In Yaounde, SuPs are more than just disposable items. These ordinary objects hold deep meaning, representing both convenience and the pulse of modern life, the changing rhythms of consumption, and the subtle shifts in societal values. From jus packaged in plastic bottles to plastic-wrapped meals, these plastics embody the city's embrace of convenience and the global reach of consumer behaviour.

SuPs go beyond their practical purpose and become symbols of social status, technological advancement, and the transformation of everyday objects into commodities. Their presence in the urban landscape reflects contemporary consumer behaviours and the interplay between local traditions and the influences of a globalised world. Each plastic item carries a unique story and is a small part of the intricate narrative of our evolving material culture.

In simpler terms, single-use plastics in the city represent more than just their practical use. They tell a story about our modern way of life, our values, and our consumer behaviour. They symbolise social status, technological progress, and the transformation of everyday

objects into commodities. Each plastic item has a unique story and reflects the complex relationship between local traditions and global influences in our evolving material culture.

In Yaounde, the use of SuPs goes beyond their physical presence. It also affects social interactions, economic activities, and environmental practices. Empirical research shows that these plastics significantly influence daily routines, resource management, and waste disposal rituals. Examining the material culture of SuPs in Yaounde helps to understand how consumer behaviour, environmental sustainability, and cultural symbolism intersect and impact urban life in the region.

Many people believe that recycling plastic is an easy fix for dealing with SuPs, but it is not that straightforward. It is vital to take a closer look at the many complex factors involved in plastic recycling, such as social norms, cultural practices, and the availability of proper infrastructure. In her book "Plasticity: Willful Design and World-Making " Dr Jennifer Gabrys asserts that recycling is not solely a technical process but also a social and political one influenced by social expectations, cultural narratives, and power dynamics within the recycling industry.

Some researchers emphasise the need for a holistic comprehension of plastic recycling in managing single-use plastics. This understanding should encompass technical infrastructure, social practices, cultural significance, and the economic and political frameworks that govern the recycling sector. They call for creating recycling programs tailored to specific contexts, challenging narratives of individual responsibility, advocating for transparent and equitable recycling systems, and allocating resources for research and innovative recycling technologies.

#### **4.2.4 Intergenerational Transmission of Plastic-Related Norms**

In the words of Mr. Doumbou, a 45-year-old resident of Yaounde, the intergenerational transmission of plastic-related norms is a crucial aspect of the city's cultural heritage. He states, "We have always taught our children to respect the environment and to use plastic materials wisely. This is a tradition that has been passed down from generation to generation."

He further explains that traditional beliefs and practices regarding plastic usage and waste management are deeply rooted in family and community settings. He notes, "We have certain taboos and restrictions regarding the use and disposal of plastic materials. For example, it is considered disrespectful to throw plastic waste on the ground in front of someone's house and we teach that to our children."



However, Mr. Doumbou acknowledges that younger generations are facing a struggle between traditional beliefs and contemporary lifestyles. He observes, "Young people today are facing a lot of challenges when it comes to plastic usage. They are influenced by modern lifestyles and consumer culture, which can sometimes conflict with our traditional values."

Despite these challenges, Mr. Doumbou remains optimistic about the future of plastic-related norms in Yaounde. He believes that the continuous process of cultural inheritance and adaptation will lead to the evolution of plastic-related traditions within the cultural tapestry of the city. In his own words, "I believe that our traditions will continue to evolve and adapt to modern times. We will find a way to balance our traditional values with contemporary lifestyles, and we will continue to teach our children the importance of respecting the environment and using plastic materials wisely."

### **4.3 Gender Roles and Plastic Consumption Dynamics**

An anonymous interviewee asserts that the relationship between gender roles and plastic usage is a complex issue that necessitates further investigation. In her own words, "Gender norms and expectations play a significant role in how individuals acquire, use, and dispose of plastic products. Understanding this relationship is crucial for promoting sustainable and gender-sensitive plastic usage and waste management approaches."

She further explains that marketing strategies often target specific genders, perpetuating certain stereotypes and reinforcing gender norms. She notes, "Plastic products are often marketed to women as a way to fulfill traditional gender roles, such as being a good housewife or mother. This can lead to excessive plastic consumption and waste."

The study conducted by the interviewee also examines the division of labour in relation to plastic usage and waste management. She explains that in many households, women are responsible for managing plastic waste, which can be a time-consuming and physically demanding task. She notes, "Women often bear the burden of plastic waste management, which can have negative impacts on their health and well-being."

#### **4.3.1 Division of Labour in Plastic Consumption**

Mr. DOUMBOU, the head of the Injection section in SOFAMAC, shared his insights on the division of labour in plastic consumption. According to him, "The allocation of tasks and responsibilities related to acquiring, utilizing, and disposing of plastic products within households and communities is influenced by gender roles and societal expectations. This can lead to a gendered division of labour that impacts the management of single-use plastics."

Mr. DOUMBOU further explained that in most neighbourhoods in Yaounde, women are primarily responsible for purchasing and managing household goods, including plastic products such as food packaging, storage containers, and utensils. He noted, "Women are often responsible for utilizing these plastic items in daily activities such as food preparation, storage, and serving. They also take on a significant role in the disposal of plastic waste generated within most households."

Mr. DOUMBOU also pointed out that some men in Yaounde are more involved in tasks related to larger-scale waste management, such as coordinating the disposal of plastic waste from construction or maintenance activities. He stated, "Men may also play a role in decision-making regarding purchasing durable plastic items for specific purposes, such as tools, equipment, or construction materials. They are also involved in community-level initiatives related to plastic waste management, such as organizing clean-up efforts or participating in recycling programs."

Mr. DOUMBOU further noted that the division of labour in the use of plastics mirrors more significant power dynamics and social structures within a particular cultural setting. He stated, "In my opinion, traditional gender roles and societal expectations impact the decision-making process concerning plastic consumption, as well as the assignment of tasks among household members."

#### **4.3.2 Gendered Marketing and Consumer Behaviour**

According to Ms. Virginie Nkolo, a housewife and marketing expert in Messamendongo, the dynamics of gendered marketing and consumer behaviour play a significant role in shaping the patterns of plastic consumption in the city. In her own words, "Some plastic things like soap containers or plastic spoons, forks, and plates that you use once, are sometimes made for women. They do this by using old beliefs about what men and women should do. These special advertisements can make people think in a certain way based on what men and women are expected to do, affecting the kind of plastic things people buy and use at home."

Ms. Virginie Ekotto a trader in the Central market provides real-life examples of gendered marketing in Yaounde, such as marketing cleaning products with imagery and messaging targeting women as the primary consumers. She notes, "These ways that people sell things can remind us of the traditional ideas about what men and women should do at home. By doing this, they can make people think that some plastic things are only for women to use at home." She further notes that the promotion of durable plastic items is often tailored towards

men, aligning with societal expectations of male roles in maintenance and construction activities. In her own words, "These gendered marketing approaches can significantly impact consumer behaviour in Yaounde."

Furthermore, she explains that the influence of gendered marketing and consumer behaviour extends beyond the point of purchase, affecting the utilisation and disposal of plastic products. She notes, "Sellers who make plastic things like plates or plastics that we use for wrapping food, may make women feel like they are the ones who have to decide what to buy in their houses. This can make women choose what to do with these plastic things and how to throw away after using them."

### **4.3.3 Environmental Impact and Gender Perspectives**

The environmental impact of plastic consumption in Yaounde is deeply intertwined with gender perspectives, reflecting the complex interplay of cultural norms, social roles, and ecological consequences. Ethnographic research reveals that women often bear a significant burden in managing the environmental impact of plastic consumption within households and communities. For example, women may be primarily responsible for household tasks that involve using and disposing of plastic products, such as food storage, meal preparation, and waste management. This gendered division of labour influences the environmental footprint of plastic consumption as women navigate the challenges of minimising waste and promoting sustainable practices within their domestic spheres.

Moreover, gender perspectives intersect with environmental impact in the context of plastic waste management and recycling efforts. In Yaounde, women are often actively involved in informal recycling networks, contributing to reducing plastic waste by participating in sorting and repurposing activities. This involvement not only reflects the economic dimensions of waste management but also underscores the role of women in mitigating the environmental consequences of plastic consumption. Anthropological inquiry into these gendered environmental practices sheds light on how women's agency and knowledge contribute to sustainable solutions for plastic waste within the local context.

Furthermore, the environmental impact of plastic consumption is influenced by gendered resource access and decision-making patterns. In many households in Yaounde, women's roles as resource managers and caregivers position them as key actors in determining the use and disposal of plastic products. This dynamic underscores the importance of understanding gender perspectives in environmental anthropology, as it reveals how women's agency and decision-making influence the ecological outcomes of plastic consumption. By

examining the environmental impact through a gendered lens, we have uncovered the diverse strategies and challenges women encounter in navigating plastic consumption and waste management within Yaounde's specific cultural and environmental context.

#### 4.4 Influence of Urban Lifestyles on Household Plastic Consumption

The shortage of water resources in Yaounde's urban area is a major challenge for daily life, closely linked to the activities of CAMWATER, the main provider of public drinking water services. The sporadic water supply disruptions, caused by infrastructure constraints and inconsistent operations of CAMWATER, have prompted residents to adapt culturally. Plastic bottles, originally used for drinks, have now become crucial for storing water, acting as a safeguard against unpredictable access to running water. In the field of anthropology, this occurrence highlights the ever-changing connection between human communities and their surroundings, with objects such as plastic bottles being created in response to environmental challenges. It also shows how local communities are strong in overcoming challenges caused by lack of infrastructure, highlighting the intricate relationship between socio-economic factors, technological structures, and environmental conditions in influencing daily practices and resource management plans.



**Photo 24:** Prepared for regular water cuts: Stocking up water in plastic bottles  
**Source:** Mbanam Valentine, 12<sup>th</sup> April 2024

The picture shows many plastic bottles being prominently showcased in a home in Mendong, Yaounde 6 sub-division. These 10 litre bottles are placed in neat rows, showing that they are used strategically for water storage. Placed among the household items, the bottles symbolize the need for resourcefulness due to the lack of water in the neighbourhood. The clear

plastic containers provide a view of the liquid inside, emphasizing their main purpose as being for storing necessary hydration. The large number of bottles shows how common the practice is in the community, illustrating the widespread use of makeshift solutions to address issues with inconsistent water supply.

At this juncture, we are examining how urbanisation consumer behaviours and the use of plastic products within households are interconnected. Specifically, it focuses on a metropolitan city like Yaounde, where urban lifestyles have led to a convenience culture driving the widespread consumption of single-use plastics. The section explores the impact of urbanisation on consumer behaviours, the rise of supermarkets and convenience stores, and how fast-paced urban life shapes the demand for portable plastic products. It also discusses the generation of plastic waste in urban areas and the cultural and social factors that influence plastic consumption and waste management practices. This section aims to comprehensively understand how urban lifestyles influence household plastic consumption and contribute to the discussion on sustainability and environmental impact in urban settings.

Understanding how people behave after using products is crucial in the complex world of managing household plastics within urban lifestyles. Paxson (2015), in her book "Trashed: How Things Lost to the World Become Resources," sheds light on the diverse spectrum of actions people take after using, discarding, or abandoning SuPs. These actions, from formal recycling and waste disposal to informal reuse and creative interventions, are not solely individual choices but dynamic processes shaped by cultural norms, socioeconomic factors, infrastructure, and material characteristics. Acknowledging the complexity of post-consumer behaviour, Paxson challenges us to move beyond blaming individuals and instead focus on addressing sociocultural and infrastructural constraints. This approach empowers communities, encourages responsible post-consumer practices, and leverages indigenous knowledge and local ingenuity, ultimately leading us towards a more sustainable future in managing single-use plastics within urban households.

#### **4.4.1 Convenience Culture and Single-use Plastics**

In an African capital like Yaounde, the intersection of convenience culture and single-use plastics reflects a complex interplay of cultural, economic, and environmental factors. Ethnographic research reveals that urbanisation and modernisation processes have led to the adoption of convenience-oriented lifestyles, where the use of single-use plastics for packaging, storage, and disposable items has become increasingly prevalent. This convenience culture is shaped by the proliferation of supermarkets, convenience stores, and fast-food outlets in urban

areas, which have facilitated the widespread use of plastic packaging for food and beverages. Moreover, the fast-paced nature of urban life often leads to a greater reliance on single-use plastic items for on-the-go consumption, reflecting the influence of convenience culture on consumer behaviours and household plastic consumption patterns.

The convenience culture and reliance on single-use plastics reflect broader societal changes and influences. The adoption of convenience-oriented lifestyles is not only a result of urbanisation but also a response to globalised consumer trends and the increasing availability of mass-produced goods. This cultural shift has significant implications for waste management and environmental sustainability, as the widespread use of single-use plastics contributes to plastic waste generation within urban areas.

#### **4.4.2 Urban Lifestyle and Hybridity**

The cultural dynamics of hybridity can be observed in the use of plastic bottles to package traditional palm wine “matango” in Yaounde. This practice represents a fusion of modernity and tradition, where plastic bottles, a symbol of globalization and industrialization, are used to package a beverage that has been a part of Cameroonian culture for centuries. Mr. Paul Olinga, a staff member at the University of Yaounde 1, shares his insights on the cultural dynamics of hybridity in the city. He notes that this can be observed in the use of plastic bottles to package “matango” in Yaounde. In his own words, "This practice represents a combination of modernity and tradition, where plastic bottles, a symbol of globalization and industrialization, are used to package a beverage that has been a part of Cameroonian culture for centuries."

Mr. Olinga also points out that plastic bags are often used to package traditional foods such as fufu, but this contributes to plastic waste. However, he notes that some vendors have started using other packaging options like paper bags, demonstrating a hybrid approach to packaging that combines traditional and sustainable practices.

Furthermore, Mr. Olinga notes that plastic containers for take-out food are often used, but they also contribute to plastic waste. He highlights that some vendors have started using reusable containers made from traditional materials such as bamboo or calabash, demonstrating a hybrid approach to packaging that combines traditional and sustainable practices.



**Photo 25:** Hybridity shown as a plastic bottle is used to package Palmwine  
**Source:** Mbanam Valentine, 9<sup>th</sup> March, 2024

#### **4.4.3 Plastic Waste Generation and Urban Consumption Patterns**

According to research, cities' growth and modernisation have resulted in the acceptance of lifestyles prioritising convenience. This has led to a rise in the use of single-use plastics for packaging storage and disposable items. The prevalence of supermarkets, convenience stores, and fast-food outlets in urban areas has further contributed to this convenience culture, as plastic packaging for food and beverages is widely used. Additionally, the fast-paced nature of urban life has increased the dependence on single-use plastic items for on-the-go consumption, highlighting the impact of convenience culture on consumer behaviour and household plastic consumption.

Convenience culture and reliance on single-use plastics in an African capital like Yaounde reflect broader societal changes and influences. The adoption of convenience-oriented lifestyles is not only a result of urbanisation but also a response to globalised consumer trends and the increasing availability of mass-produced goods. This cultural shift has significant implications for waste management and environmental sustainability, as the widespread use of single-use plastics contributes to plastic waste generation within urban areas.

#### **4.4.4 Sustainable Practices and Urban Plastic Consumption**

Sustainable practices and urban plastic consumption in Yaounde also reveal the complex interplay of cultural, economic, and environmental factors that shape consumer behaviours and waste management practices within the urban context. Fieldwork research highlights the emergence of sustainable practices and initiatives to address the environmental impact of plastic consumption in urban environments. These initiatives include community-driven recycling

programs, the promotion of reusable alternatives to single-use plastics, and efforts to raise awareness about the ecological consequences of plastic waste generation. By studying these sustainable practices, we gain insights into the cultural and social dynamics that influence adopting environmentally conscious behaviours within urban settings.

Furthermore, the connection between sustainable practices and urban plastic consumption in Yaounde reflects broader societal changes and influences, such as the growing awareness of environmental issues and the increasing emphasis on corporate social responsibility. When delving into sustainable practices, we uncovered how city dwellers grapple with plastic consumption and waste management complexities. This sheds light on the diverse strategies and initiatives to promote sustainable behaviours and reduce plastic waste's environmental impact.

Moreover, the study of sustainable practices and urban plastic consumption from an anthropological perspective underscores the importance of culturally sensitive and community-driven approaches to promote environmentally sustainable behaviours. By connecting with the people in our local communities and gaining insight into the cultural forces that shape plastic consumption and waste management, we are actively contributing to creating comprehensive plans that resonate with Yaounde's unique cultural and environmental landscape.

The plans that resonate with Yaounde's unique cultural and environmental landscape are developed in collaboration with local communities and are sensitive to the city's cultural dynamics and environmental context. These plans include initiatives such as community-driven recycling programs, the promotion of reusable alternatives to single-use plastics, and efforts to raise awareness about the ecological consequences of plastic waste generation frequently organised by the Councils. They also involve strategies for integrating traditional practices and beliefs regarding waste management into modern sustainability efforts, as well as engaging with local artisans and craftspeople to promote upcycling and repurposing of waste materials. A good example is planting flowers in plastic bottles along the roads in Yaounde 1, beside the MAHIMA supermarket, encouraged by the Yaounde1 Council.

#### **4.5 Public Events and Gatherings**

In Yaounde, single-use plastics have become a favoured choice for events and gatherings due to their convenience, affordability, and ease of disposal. These plastics influence power dynamics by creating hierarchies based on access to and display of disposable items. The practices and symbolism associated with single-use plastics reflect modernity, progress, and sometimes even social status in these events. Moreover, in traditional medicine, SuPs are



incorporated into rituals and practices, intertwining modern materials with cultural beliefs. However, the prevalent use of SuPs raises concerns about their economic and environmental implications, as the city grapples with the challenge of managing the significant waste generated by these events, impacting both the local economy and the ecosystem.

#### **4.5.1 Power Dynamics and Contestations**

Power dynamics and contestations in single-use plastics management in Yaounde reveal a complex interplay of social, economic, and political forces. Empirical research in Yaounde uncovers how power is wielded and contested among various stakeholders involved in the production, distribution, and disposal of single-use plastics. This could include examining the influence of multinational corporations, local businesses, government agencies, waste pickers, and community organisations in shaping the city's plastic waste management practices.

Furthermore, shedding light on how power dynamics influence the perceptions and behaviours of different social groups regarding single-use plastics uncovers how cultural norms, socioeconomic status, and access to resources impact individuals' attitudes towards plastic consumption and waste management.

Moreover, contestations and negotiations between various actors with competing interests disclose conflicts over land use for waste disposal, disagreements about recycling initiatives, and debates surrounding the implementation of plastic regulations. By delving into these contestations, we have an invaluable perspective on the underlying power struggles and social tensions that shape the city's approach to managing single-use plastics. In some neighbourhoods, one finds dumping grounds determined by the population without the approval of the competent authorities.

Also known as Styrofoam, plastic foam boxes have seen recent adoption by many fast-food establishments and event organisers in Yaounde, marking a new trend among the city's residents. Respondents who acknowledged using these containers highlighted their distinctive features, which have addressed previous challenges faced during events, mainly when serving appetisers. The convenience of these foam boxes was emphasised, as they are easy to handle and suitable for use by individuals of all ages. Their lightweight and sturdy nature and excellent insulation properties make them a preferred choice for preserving food temperature, mainly when serving various appetisers and fast foods in Supermarkets. The foam boxes' design, complete with a cover that effectively retains heat, ensures that food remains warm for an extended period, catering to the preferences of consumers who enjoy hot or warm meals.



**Photo 26:** Lunch packaged in foamed boxes in a public gathering  
**Source:** Mbanam Valentine, 13<sup>th</sup> February 2024

#### **4.5.2 Practices and Symbolism of Single-use Plastics**

In Yaounde, the rituals and symbolism surrounding single-use plastics are deeply intertwined with cultural practices and everyday life. For example, in religious spaces such as churches and mosques, single-use plastics may be ritualized by offering or sharing water or other beverages in disposable plastic containers during religious ceremonies. These practices serve practical purposes and carry symbolic meanings related to hospitality, communal sharing, and spiritual nourishment.

Some religious leaders in Pentecostal churches like « Light Word Mission » and « Holy Ghost Zone », selling anointed water and anointed oil, say they prefer plastic bottles for several reasons, including practicality, cost-effectiveness, and convenience. A bottle of anointed water is sold at the “Holy Ghost Zone Ministries” for XAF 400. In some cases, plastic bottles are lightweight, durable, and easily transportable, making them ideal for distributing and selling these sacred liquids to a broad audience. Additionally, plastic bottles are often more affordable than glass or other materials, allowing them to package and distribute their products at a lower cost, making it cheaper for their church members to afford.



**Photo 27:** A sample of Anointing Water in a plastic bottle  
**Source :** @NdeffoRodrigue's video Tweet

Photo above displays the packaging of anointing water in plastic bottles within churches across Yaounde, notably exemplified by "La Communauté Missionnaire" in Mendong, led by Prophète Rodrigue NDEFFO. This practice holds profound cultural and symbolic significance. In a society shaped by a blend of traditional customs and modern influences, the choice to use plastic bottles for anointing water serves various purposes.

Firstly, it meets the expectations of contemporary consumers, offering convenience, portability, and accessibility to church members. Moreover, the branding and marketing of anointing water, often featuring the photograph of the church leader, signifies a form of spiritual authority and endorsement. This visual representation strengthens the charismatic leadership of the prophet and reinforces believers' perception of the water's efficacy. Additionally, the use of plastic bottles facilitates mass production and distribution, enabling churches to extend their reach and cater to the spiritual needs of a broader audience. Ultimately, this adaptation reflects the intersection of tradition and modernity in Cameroonian society, providing both a culturally resonant practice and a practical means of imparting spiritual blessings.

Additionally, traditional medicine pharmacies in Yaounde may be sites where rituals and symbolism related to single-use plastics are observed. For instance, the packaging of herbal remedies, powders, or ointments in single-use plastic sachets or containers may hold symbolic value in the context of healing and wellness practices. These plastic containers may be imbued with meanings related to modernity, convenience, or hygiene, and their use in traditional medicine rituals could reflect the intersection of traditional healing practices with contemporary material culture.

Furthermore, the disposal and management of single-use plastics in Yaounde may also be imbued with symbolic significance. For example, discarding plastic waste in specific

locations, such as communal dumping sites or informal recycling centres, carries symbolic meanings related to cleanliness, pollution, or environmental stewardship.

### 4.5.3 Traditional Medicine

Youssuf Ibrahim, a street vendor of traditional medicine in Yaounde, shares his insights on the growing trend of using plastic bottles in traditional medicine practices. According to him, "Plastic bottles are more and more being used as vessels for different traditional remedies and potions. This trend is now common among both traditional healers and people looking for alternative healthcare options."

Ibrahim notes that plastic bottles are preferred for their ease, low cost, and availability, making them a convenient option for storing and distributing traditional medicines. He further explains that the move towards plastic bottles in traditional medicine in Yaounde demonstrates the merging of modernity and traditional healing practices. In his own words, "This shows how healthcare preferences are changing and traditional customs are being adapted to current conditions."



**Photo 28 :** Plastic bottles containing quinine bark, to treat sicknesses like malaria  
**Source:** Mbanam Valentine, 12 January, 2024

The use of quinine bark, a traditional remedy for treating various ailments such as fever and malaria, which is placed in plastic bottles and sold in Yaounde, is a common practice that raises health and safety concerns. This traditional method of folk medicine may pose risks, particularly regarding hygiene and the quality of the products sold. It is essential to consider sanitary standards and the origin of the ingredients used to avoid any health hazards for consumers.

#### 4.5.4 Economic and Environmental Implications

A shopkeeper in Efoulan, Yaounde 3, who requested anonymity, shares his insights on the economic and environmental implications of single-use plastics in the management of public events and gatherings in the city. According to him, "The widespread use of single-use plastics in these contexts contributes to direct and indirect costs. Event organizers often incur expenses for purchasing disposable plastic items such as cups, plates, and cutlery, which can impact their budgets."

The shopkeeper further explains that the costs associated with waste management, including collection, transportation, and disposal of single-use plastics generated at public events, further strain municipal resources and budgets. He notes that these economic implications highlight the financial burden and the reliance on single-use plastics placed on event organizers and local authorities in Yaounde.



**Photo 29:** Packaged water bottles in a wholesale shop in Efoulan, Yaounde 3

**Source:** Mbanam Valentine, 18<sup>th</sup> January 2024

In Yaounde, the business activities around drinking mineral water in plastic bottles are multifaceted and deeply integrated into the city's commercial landscape. Numerous local and international companies are involved in bottled mineral water's production, distribution, and sale, catering to a diverse consumer base. These businesses operate through a network of manufacturing facilities, distribution centres, retail outlets, and vending points, reflecting the city's widespread availability and consumption of bottled mineral water.

During the fieldwork, we analyzed the economic dynamics, market competition, and consumer behaviours that shape the industry of drinking mineral water in plastic bottles from

an anthropological perspective. This involved examining branding, marketing strategies, pricing, and the cultural significance of bottled water consumption in Yaounde. Additionally, I paid particular attention to the environmental impact of plastic bottle waste and the efforts of businesses to address sustainability concerns. The fieldwork yielded valuable insights into the complex interaction of economic, cultural, and environmental factors within the bottled water industry in Yaounde.

Furthermore, the role of informal vendors and small-scale entrepreneurs in the distribution and retail of bottled mineral water adds another layer of complexity to the business activities in Yaounde. Overall, the business activities around drinking mineral water in plastic bottles in Yaounde encompass various economic, cultural, and environmental dimensions, making it a rich subject for anthropological inquiry.

Regarding environmental implications, managing single-use plastics at public events and gatherings in Yaounde contributes to plastic pollution and environmental degradation. The widespread use of disposable plastic items leads to the generation of significant amounts of plastic waste, which ends up in landfills or as litter in the environment. This detracts from the aesthetic appeal of public spaces and poses risks to wildlife and ecosystems. Moreover, the inadequate disposal and recycling infrastructure in Yaounde can result in plastic waste leaching into soil and waterways, further exacerbating environmental concerns.

Addressing the economic and environmental implications of single-use plastics in the management of public events and gatherings in Yaounde requires a comprehensive approach that considers both the financial costs and the ecological impact. Implementing strategies to reduce the reliance on single-use plastics, such as promoting reusable alternatives, implementing waste reduction measures, and improving recycling infrastructure, can help mitigate the economic burden and environmental harm associated with plastic waste. Furthermore, raising awareness and fostering a culture of sustainability among event organizers, attendees, and local communities can contribute to more responsible and environmentally friendly practices in managing public events and gatherings in Yaounde.

#### **4.6 Institutional Consumption**

In Yaounde, single-use plastics are common in government offices, schools, and other public institutions, leading to significant plastic waste. Disposable plastic items like cups, bottles and bags are frequently used in government offices for daily operations meetings and official events. Similarly, schools and educational institutions often rely on single-use plastics to serve students and staff meals, beverages and snacks. This widespread use of single-use

plastics in institutional settings contributes to plastic waste buildup and reflects a broader dependence on convenient disposable products.

#### 4.6.1 Government Offices

Persons in their workplaces need to have better working conditions to be able to render good services. Rehydration is very common in offices because water is essential for men. Many different sources of water are accessible when people are found outdoors. Administrations that can afford better working conditions buy mineral water packaged in plastic bottles because of their huge budget compared to others in the private sector.

Fouda André, a civil servant working in MINEPAT, attests to the use of plastic bottles in his administration. In an interview, he shared that it is common among many civil servants to buy mineral water in plastic bottles, and these waste plastics are collected by hygiene and sanitation agents working on the premises. Fouda further explained that these plastic wastes are temporarily stored under his office table in a carton, as shown in the photo below. When they reach the desired quantity, they are transported to the markets where cooking oil retailers buy and use them for packaging.



**Photo 30: Empty plastic bottles under the table of a civil servant in MINEPAT<sup>33</sup>**

**Source:** Mbanam Valentine, 9<sup>th</sup> Septembre 2020

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<sup>33</sup> Ministry of Economy, Planning and Regional Development





**Photo 31:** Plastic bottles temporarily kept in a toilet waiting for the quantity to increase so it could be taken to the market and sold

**Source:** Mbanam Valentine, 9<sup>th</sup> Septembre 2020

#### 4.6.2 Educational Institutions

Schools are known to have a significant population. It is this number of persons that form the plastic waste production unit. The Primary, Secondary and University all use SuPs on different occasions. Pupils and students frequently use light plastic bottles for drinking water and beverages. They are also widely used for packaging by the brewery industries and local beverage producers, who reuse discarded or thrown-away plastics to packaging their homemade juices. In some schools, we can find “*foléré*”, “*ginger*”, and “*soursop*” juice packaged in small plastic bottles in canteens.

Waste disposal is similar, irrespective of the level of education. Schools have waste bins at the disposal of pupils and students to dump their waste. Some schools have signposts that forbid haphazard waste disposal practices. These waste bins are placed almost everywhere to facilitate proper waste disposal habits. Unfortunately, that does not always guarantee clean campuses. Littering is the order of the day on some school premises. This explains why plastic wastes are seen littered all over the place.





**Photo 32:** A trash can was placed on the University of Yaounde 1 Campus

**Source:** Mbanam Valentine, 14<sup>th</sup> November 2020



**Photo 33:** Foamed plastic boxes in a dumping ground on the Campus of the University of Yaounde 1

**Source:** Mbanam Valentine, 8<sup>th</sup> September 2021

#### **4.6.3 Markets and other Businesses**

Public place here refers to what Augé (1992) refers to as "None-places". A non-place is any place where persons temporarily spend part of their time. It is a place where social activities take place just for a period. These are primarily places of work, the school milieu, and markets, to name these examples. On the contrary, Places refer to households in this context where culture is built and moulding an individual's behaviour. It is possible in "places" because of the length of time rather than in a milieu where spontaneous activities take relatively short, where interaction is brief, not giving enough time to construct social behaviour.

Inhabitants of Yaounde cast their choice on single-use plastics because they protect food much more straightforwardly than other materials. They maintain the same freshness when they put food or other substances in plastics. Moreover, this freshness lasts much longer. The kinds of food many prepare are favourable to the plastics' capacities to keep them from spoiling. One of the well-known characteristics of single-used plastics is their impermeable characteristics. When liquid or semi-liquid substances are placed, they are preserved from leakages.

Anne, a small-scale entrepreneur from the North West region of Cameroon, attests to the importance of plastic sachets in her "puff puff and beans" business. According to her, "Plastic are very important because they facilitate the packaging and distribution of pap, to my different customers. This plastic is very cheap and easy to find. Boys selling plastics come and sell them to us everyday. My customers are mostly bike riders and students, who live near and some live far away."

Anne further explains that the affordability and accessibility of plastic sachets enable her to efficiently package and sell her products, contributing to the sustainability of her business and her ability to contribute to her family's financial well-being. She notes that plastic sachets are also very good at protecting and preserving food, allowing for a wide variety of fresh food to be preserved and consumed after an extended period.

The photo below shows Anne packaging her "pap" in a plastic sachet, highlighting the practical utility of plastic packaging within the context of small-scale entrepreneurial endeavours. Anne's case study underscores the intersection of traditional culinary practices, economic empowerment, and the practical utility of plastic packaging in supporting livelihoods and meeting the diverse needs of local communities in the North West region of Cameroon



**Photo 34:** Traditional Snack Vendor Packaging Fresh Pap in Lightweight Plastic Sachet for Customer

**Source:** Mbanam Valentine, 15<sup>th</sup> January 2020

Furthermore, Anne notes that packaging with some kinds of plastics is considered by many to be more hygienic than other packaging materials like paper. Keeping food or other products in these plastics helps insulate against airborne germs and prevent germs from being spread by people. She explains that food manipulation often calls for the use of these plastics as they serve as gloves, preventing the hand from directly contacting the foodstuff and reducing the risk of contamination



**Photo 35:** Watermelon rapped with a plastic

**Source:** Mbanam Valentine, 11<sup>th</sup> March 2020

To many Yaounde city dwellers, the use of plastic sachets to package perishable food items like watermelon by fruit retailers is viewed as a crucial aspect of maintaining hygiene standards like shown in the photo above. The individual packaging ensures that the food remains uncontaminated and safe for consumption, especially in bustling markets where various customers handle the produce. Moreover, these sachets offer convenience and portability, allowing customers to easily carry and consume the food on the go. This cultural practice not only emphasizes the importance of cleanliness and food safety but also caters to the lifestyle needs of consumers in fast-paced urban environments.

#### **4.7 Plastics Consumption in Agricultural practices**

Investigating the recycling and repurposing of single-use plastics by Yaounde residents highlights the role of single-use plastic bottles in Urban Agriculture and various innovative initiatives to promote sustainable eco-tourism and eco-furniture. Plastic bags and bottles,

among other single-use plastics, are creatively repurposed within the agriculture sector and gardening practices to contribute to these sustainable endeavours.

#### 4.7.1. Plastic Bags in Floriculture for Poverty alleviation

Floriculture, the cultivation and management of ornamental and incredibly flowery plants, has quickly become an activity embraced by many Cameroonians to fight poverty. These plants provide food on their table and make the roadsides look beautiful. Nevertheless, the sector still needs to be organized by the authorities in the same way as the other activities in the informal sector. The sale of natural flowers is part of the socio-economic landscape of Yaounde as it generates enormous income that contributes to ameliorating the living conditions of the actors in this sector ( Ndzié & Fondze, 2017).



**Photo 36:** PET reused plastics of more than 61µ containing soil mixed with fertilizer  
**Source:** Mbanam Valentine, 17<sup>th</sup> February 2019

Unequipped with specialized education, these floral professionals utilize tools such as funnels, watering cans, spades, and trowels while possessing extensive practical knowledge about diverse flower varieties and their care requirements. However, owing to economic hardship—a consequence of migration driven by poverty—they often cannot access professional training. Consequently, they operate with limited expertise in plant species, resulting in challenges when meeting customer demands accurately. In contrast, those who have received no formal training are sometimes perceived as fraudulent or unskilled within the field despite their efforts.

Our florist, who has been in the business for over 45 years, began in another city but was forced to relocate to Yaounde. He justifies his activity with his love of nature and believes he



has a natural talent for flower cultivation. To demonstrate his passion for flowers, he has participated in numerous training programs to improve his skills in his field. He is next to the Mahima supermarket, opposite the City Council's garden and the Mfoundi stream. Various flowers are displayed along this path, adding to the city's beauty.

The garden is meticulously organized into distinct sectors based on their designated categories. These sectors encompass flowers, shrubs, and various fruit plants. To nurture the plants effectively, a blend of manure and nutrient-rich soil is prepared, often utilizing plastic bags sourced from discarded materials or purchased from scavengers at affordable rates. The first sector features an array of fruit trees, including grapefruit, soursop, lemon, mango, plum, coconut dwarf, mandarin, palm, and guava trees. In the second flower plant sector, a diverse selection of flowers thrives. This includes Isora, Canas, Hibiscus, Acacia Fleuribonda, Zinnias, Trialis, Pride of China, Periwinkle of Madagascar, Dactora, Daisy, Iris, Gladioli, Dahlias, Cosmos, Freesias, Forget-me-nots, Wild Roses, Terminalia among others. Noteworthy mentions are the Eucalyptus plant, known for its medicinal properties in treating respiratory ailments, and its utility as electric poles during electrical installations. Sector three houses bird trees such as hedges found in the Centre Region of Cameroon villages. These trees bear yellow flowers and produce a thick white sap used by some for staunching bleeding from open wounds.



**Photo 37:** Plastic bags sorted out and reused by a gardener to grow flowers in the Central town

**Source:** Mbanam Valentine, 17<sup>th</sup> February 2019

Other innovations will be presented, such as manufacturing eco-boats that could boost the country's eco-tourism sector, especially in maritime endowments. Furniture designs using plastic waste can be a substitute for the existing wood furniture. In the long run, this can be an effective way of fighting deforestation. This plastic furniture could be a suitable option during floods due to its impenetrable nature, or better still, because of its low price.

### **4.7.2 Innovative Reuse and Upcycling Consumption Clusters**

This cluster focuses on creatively repurposing single-use plastics, examining how individuals and communities transform plastic waste into functional and culturally significant objects. It involves studying innovative reuse practices' cultural, social, and economic dimensions and the environmental implications of such creative endeavour. Eco-tourism and Eco-furniture are presented to showcase creativity and repurposing in some sectors.

## **4.8 Plastic Lifecycle**

From an anthropological perspective, plastic's "life cycle" extends far beyond the linear production-consumption-discard trajectory often depicted. Anthropologists delve deeper, revealing the complex social, cultural, and economic entanglements woven into every stage of plastic's journey. Here is a breakdown of the "plastics lifecycle" through an anthropological lens: Extraction and Production: Power, Politics, and Place. Anthropologists like Li (2015) expose the power dynamics embedded in plastic's origin story. Resource extraction for production can involve land grabs, displacement of communities, and environmental degradation, raising questions about environmental justice and equitable resource utilization. Understanding these power dynamics is crucial for developing sustainable and ethical sourcing practices. Circulation and Consumption: Cultural Meanings and Social Practices.

Watson (2020) reminds us that objects hold stories and meanings imbued by the cultures that use them. Plastic, in different contexts, can symbolize modernity, convenience, or even status. Understanding these cultural associations informs effective interventions to promote responsible consumption and encourage shifts towards sustainable alternatives. Waste and Transformation: Informal Systems and Reimagined Value.

Anthropologists like Wilson (2012) highlight the crucial role of informal waste pickers in managing plastic waste, particularly in developing countries. They challenge narratives of "disposable waste" by showcasing the ingenuity and resourcefulness of communities who reimagine plastic's value within informal recycling systems. Understanding and supporting these systems is vital for building inclusive and sustainable waste management solutions.

Beyond Disposal: Environmental Impact and Futures: The environmental consequences of plastic pollution are well documented, but anthropologists like Geismar (2020) urge us to consider the social and cultural dimensions of these impacts. Plastic pollution threatens

livelihoods, health, and cultural practices, calling for holistic approaches addressing environmental and social justice concerns.

Shifting from a technical view of plastic's life cycle to an anthropological lens reveals a tapestry of interwoven power dynamics, cultural influences, and social practices. This holistic perspective opens doors for collaboration and innovation. By fostering cross-cultural knowledge exchange, we can learn from diverse communities and develop sustainable solutions informed by local knowledge and practices. Understanding the cultural meanings attached to plastic allows for crafting effective interventions that address underlying motivations and behaviours, promoting responsible consumer choices. Additionally, recognizing the vital role of informal waste management systems and integrating them into formal structures can create inclusive and sustainable solutions. By reimagining the "plastics lifecycle" through this broader lens, we can move beyond simplistic solutions and embrace a complex, yet comprehensive approach that addresses the environmental, social, and cultural complexities of plastic management.

#### **4.8.1 Sustainable Eco-Tourism and Fishing Through the Recycling of Plastic Bottles**

The environmental problem has compelled modern artists to work with rubbish in its most non-biodegradable forms (Thompson, 1979; Boetzkes, 2019). Entirely contemporary, craft and its underlying "tellings" transcend the colloquial, the mundane, and the local, through perhaps our perceiving it as such is part of its significance as a meaning trope (DeNicola & Wilkinson-Weber, 2020). Crafts as a discourse and praxis help people talk about themselves, their communities, and their social class. (DeNicola & Wilkinson-Weber, 2016).

DeNicola & Wilkinson-Weber (2016) underscore that the study of artisan and crafts must push back against traditionalizing and marginalizing discourses, especially when it concerns foiling cosmopolitan modernity. They add that they stand for the fact that research on craft and artisanship has the potential to open up new and evocative questions about the ways that we construct some of Anthropology's most critical contemporary concerns like market access, means of production, and control over work practices; tradition and innovation; urban and rural spaces, human rights and the environment.

Concerns about environmental protection have sparked creativity and innovations toward reducing plastic waste pollution by collecting discarded plastic waste or giving it a new life by reintegrating it into the plastic life cycle (Elfer, 2001). Agriculture represents a source of livelihood for many and, most significantly, makes nutrition possible. Endeavours to enhance

sustainable Agriculture should be encouraged by all, especially by the government authorities through subventions and policies to regulate the sector.

There is no accepted definition of what constitutes the [tourism] industry; any definition runs the risk of overestimating or underestimating economic activity. At its simplest, the sector gets people from their homes to somewhere else (and back) and provides lodging and food while away (Fennell, 2008). While the idea of the ecosystem sets the boundary of the study, anthropology provides a diachronic, holistic, contextual, and cultural point of view (Flanagan, 1997).

Eco-tourism provides anthropology and the ecosystem perspective with the opportunity to discern the complex interrelationships between humans and the environment. Ecologically, structural inequalities affect how people perceive and use natural resources and the environment (Miller, 2011). The distribution of wealth and structural inequalities are complicated by transnational corporations, which have gained economic and political power by transcending geographical boundaries and influencing political-economic structures in developing nations (Miller, 2011). Structural inequalities, therefore, affect the development processes in developing nations, influencing the creation and sustainability of eco-tourism projects (Flanagan, 1997).

As a result, environmental conservation issues in developing countries, lacking equal access to resources, regard the environment as the means to survival, providing the basic needs of the populace and an avenue toward future development. (Miller, 2011; Redcliff and Goodman, 1991; Redcliff, 1992). Therefore, this constraint weighing on the populace in developing countries must be considered when establishing projects geared towards contributing to sustainable development.

While constituting a minor fraction of both international and domestic tourism, eco-tourism persists as a feasible development avenue for countries across the globe, serving as an alternative form of tourism (Fennell, 2008). As a relatively new tourist area in Cameroon, throwing much light on this industry shall help clarify the benefits of this sector if attention is paid to it and the sector is developed. Eco-tourism is often looked upon in socio-cultural, economic and environmental aspects.

The socio-cultural impact studies consider how the industry affects the local population and their lifestyles, different from the hitherto prominent ecological study that emphasized how the industry has transformed the physical nature of the local and regional landscapes (Fennell, 2008). Interaction between different cultures may modify one or the other, in this case, the



host's or tourist's culture. Eco-tourism provides a rich sphere for the analysis of exchanges in behavioural patterns.

Unfortunately, the least emphasized pillar in sustainable tourism research is the socio-cultural component (Robinson, 1999), which could be significant in framing our perspective on economics and the environment. The socio-cultural component has fallen through the cracks because of a propensity only to study the motives and behaviours of tourists and to pay attention to the more passive recipients of the tourism industry (Chambers, 1999, cited in Stronza 2001). This pitfall can be remedied by considering both actors when researching ecotouristic sites, another reason for directing studies in this area.

An innovative and ambitious plastic bottle reusing technique has recently emerged in the country. In the past years, the multi-award winner Association has seduced many International NGOs and Sustainable development actors by contributing to plastic bottle reduction. The Madiba & Nature Association thought of how they could significantly get the plastic bottles off the streets, preventing them from ending up in the seas and endangering marine lives. They created the "Bottle-boat" or "Ecoboat," which could help redefine fishing methods in the Centre, Littoral, and South Region, where they carry out their activities. Each built Canoe is made using 1000 discarded plastic bottles. A bottle boat can carry three persons at a time, thus supporting a total weight of 270kg.

They are a non-profit organization that works to promote a Circular Economy to ensure and promote the conservation of nature and its biodiversity. They specialize in green business research and entrepreneurship. Through an environmental education system, there is a strife to help change people's attitudes and bad habits, as they put it, about their plastic waste management. Their significant contribution enabled them to win the ECONOMIC TRACK Award from the UNEP (2018) through the "Think Beyond Plastics" program in 2017. The same year, they received the best science and price from Cameroon's Ministry of Higher Education (GETEC 2017). Still, the same year, the International SWM Leader Organisation in Circular Economy awarded them the best price.

They have been based in Douala and Kribi since they went operational in 2016 and opened their branch in the Capital City, Yaounde, in 2018. In Yaounde, they have established a program to create a tourist site around the Municipal Lake by providing several eco boats and other infrastructures. They hope to extend their work to other regions. Working in Yaounde has proven successful. They have come to join other existing actors in the plastic waste sector to boost the effectiveness of their contribution to establishing better plastic management strategies.

Promoting Sustainable artisanal fishing by collecting discarded plastic bottles and transforming them into boats goes a long way toward promoting eco-tourism in Cameroon. These boats are very light as compared to the traditional wooden boats. It makes the workload lighter for a fisherman who can carry it to the sea or river alone without any support from his partner. The fishers acknowledged that the boats are sustainable; they last much longer without being broken or loosed with the cords they used in tying them, and above all, they float the same way as classical boats. Besides, wooden canoes cost 90.000 XAF, 250.000 XAF, and some close to 500.000 XAF. Receiving these boats at no price remains a booster to fishing.

Building a plastic boat takes several days; to be more precise, two persons could take three days. The tools needed are a pair of scissors and several meters of cord to attach the bottles. The plastics are picked in pools of water, rivers, and seashores. Furthermore, a similar waste collection strategy has been implemented to promote household waste separation, with eco bins strategically placed on various street corners, particularly near garbage bins. These eco bins enable municipal authorities to streamline waste management processes. The rationale behind instituting pre-collection followed by collection is to facilitate the sorting of waste bottles.

During such campaigns, a recruitment process is conducted. Those selected become volunteers who participate in the cleaning-off campaigns. This status does not confer on them the right to wages. However, they could get a token to cover their transportation. Some volunteers who have shown interest in this initiative have learned the art of building a plastic boat. They have integrated the Madiba & Nature team to build more boats. It has boosted their productivity capacity in building boats. Two boats can be produced in two weeks. Photo 49 below shows an eco-boat in the making.



**Photo 38:** An eco-boat engineer (member of the “Think Ocean” Association) that is partnering with Madiba & Nature, binding the different bottles with cords  
**Source:** Madiba & Nature, 10<sup>th</sup> June 2020

Madiba & Nature collects about three to five tons of plastic bottles monthly. Part is used to build the Eco-boats, packed in a storehouse and supplied to their partners. These actions promote environmental protection and artisanal fishing and boost the eco-tourism sector. So far, the initiative has led to the building of more than fifteen eco-boats distributed free of charge to local fishers. Their objective is to distribute fifty eco-boats to the local fishers soon. The sensitization is done towards the population, and those involved in the fishing activity are offered eco boats to motivate them with good plastic waste management practices.



**Photo 39:** A canoe made with plastics sailing on a river with a tourist in an eco-boat.  
**Source:** Madiba & Nature, 29<sup>th</sup> June 2020

#### 4.8.2 Eco-Furniture

The advancement of the Tourism sector presents a unique opportunity to leverage the ingenuity and resourcefulness inherent in repurposing plastic bottles. This endeavour addresses the pressing issue of plastic waste management and integrates these materials into the societal fabric through innovative reuse practices. The transformation of plastic bottles into eco-furniture, such as armed chairs and beds, exemplifies a sustainable approach that breathes new life into discarded plastics.

The production process involves a team of approximately twenty individuals cleaning and assembling around 500 bottles for an armed chair and 3000 bottles for a bed. Crafting each piece can span up to four days, highlighting the meticulous effort invested in creating these eco-friendly objects. This burgeoning industry fosters environmental stewardship and holds promise

in providing employment opportunities for unemployed youth, thereby contributing to economic stability.



**Photo 40:** An Eco-Furniture made from plastic bottles  
**Source:** AJADDEC, 10<sup>th</sup> April 2020



**Photo 41:** An Eco-bed made from Plastic bottles  
**Source:** AJADDEC, 10<sup>th</sup> April 2020

The eco-beds, crafted from repurposed plastic bottles, are priced between 400,000 XAF and 450,000 XAF, reflecting their value as durable and sustainable furniture pieces. Government officials have shown support for this initiative by endorsing these eco-friendly products at public events where emerging startups in the realm of sustainable development exhibit their creations. This collaborative effort underscores such ventures' potential to promote environmental consciousness and stimulate economic growth through innovative solutions.

**CHAPTER FIVE:  
EVOLUTION OF SINGLE-USE PLASTICS DYNAMICS:  
POST-PANDEMIC PERSPECTIVES**

This chapter comprehensively examines the intersection between plastic usage, policies, and governance during the pandemic and beyond. It delves into how the COVID-19 pandemic has disrupted existing plastic consumption patterns and led to the emergence of new dynamics in single-use plastic usage. The chapter also explores the challenges faced during COVID-19, such as increased plastic waste due to medical supplies and personal protective equipment, as well as the implications for waste management systems. Additionally, it scrutinises the policy and governance responses to these challenges, including implementing regulations, the role of public health considerations, and the impact on sustainability initiatives. It also provides valuable insights into the evolving landscape of plastic dynamics in the context of the COVID-19 pandemic, shedding light on the complexities of managing plastic waste during a global health crisis.

## **5.1 Policy and Governance**

Many plastics policies and governance issues reflect the critical interplay between human society and the environment. Laws regulating the use of plastics determine how individuals interact with and influence their environment, revealing the societal norms embedded within its value system. Policies regarding plastics extend beyond technical or legal measures; they encompass cultural perspectives on consumption, waste, and sustainability. Moreover, the management of plastics highlights the complexities of human-environment interactions, revealing issues such as equity, environmental justice, and resource allocation.

### **5.1.1 Government Response and Governance**

In response to the surge of single-use plastics usage amidst the pandemic, governments worldwide have taken various actions to mitigate its negative impact. These measures have considered both public health concerns and environmental considerations, including the promotion of reusable masks, proper disposal of single-use plastics, and the implementation of regulations to decrease plastic waste. In the case of Yaounde, it is crucial to examine the specific policies, public health strategies, and environmental initiatives implemented by the government to address the intersection of COVID-19 and single-use plastics.

#### **5.1.1.1 Barrier Measures against Covid-19**

The world faces several major public health issues in the new century. It is critical to figure out the role of anthropology because it provides a critical understanding of public health concerns from the perspectives of the communities affected (Hahn & Inhorn, 2009). They also



argue that Anthropological critiques of major international public health organisations and their operations and public health responses to infectious disease threats and other calamities may be addressed, in this case, COVID-19.

December 2019 saw the outbreak of the COVID-19 pandemic in the Chinese city of Wuyan. This pandemic spread to other parts of the world, including Cameroon, in March 2020, where the first registered case of patients confirmed positive was noted. A strong signal was passed across, which imposed a change of behaviour to stop the pandemic or limit its spread, especially with its very high infectious capacity. The essential part of this behaviour change is limiting contact with infected persons or objects as much as possible.

The Cameroonian Government, including its foreign partners' concerted efforts to sensitise the population on the risk of infection, also proposed responses to support their partners in addressing immediate challenges from this medical emergency, such as strengthening waste management systems. The UNEP (2018) proposed a factsheet to this effect, which considered Resolution 7 on environmentally sound management of waste of the fourth UN Environment Assembly and Resolution 8 on sound management of chemicals and waste. The President of the Republic of Cameroon instructed the limited spread of the Coronavirus, which took effect on Wednesday, March 18th, 2020. Among the instructions signed by the Head of State feature are;

- All public and private training establishments at various levels of education, from nursery schools to higher education, including vocational training centres and professional schools, will be closed.
- Gathering more than fifty (50) persons is prohibited throughout the national territory.
- Under the supervision of administrative authorities, bars, restaurants, and entertainment spots will be systematically closed from 6 pm.
- A system of regulating customer flows will be set up in markets and shopping centres
- Private health facilities, hotels, other lodging facilities, vehicles and specific equipment necessary for implementing the COVID-19 pandemic response plan in Cameroon may be requisitioned as required by competent authorities.
- Public administrations prefer electronic communications and digital tools for meetings, which are likely to bring together more than ten (10) people.
- The public is urged to strictly observe the hygiene measures the World Health Organization recommends, including regular hand washing with soap, avoiding close contact such as shaking hands or hugging, and covering the mouth when sneezing.

### **5.1.1.2 Effectiveness of Barrier Measures**

By examining the practical and symbolic meanings attached to these measures, the study reveals how they influence individual behaviours and interactions within different social contexts. Additionally, the research highlights the intersection of COVID-19 preventive measures with existing cultural beliefs and practices, leading to a reevaluation of social interactions, hygiene practices, and public gatherings. This, in turn, has resulted in shifts in behavioural norms and cultural practices related to plastic usage and waste management in Yaounde (Siewe et al., 2021).

#### **5.1.1.2.1 Momentary Closure of all Public and Private Training Establishments**

The momentary closure of public and private educational establishments during the COVID-19 pandemic in Yaounde has had significant implications for single-use plastics management. The shift to remote learning and the closure of physical educational institutions has led to an increased reliance on digital technologies and online platforms for educational delivery. This transition has resulted in a surge in the use of electronic devices, which often come with single-use plastic packaging and accessories like Polystyrene foam.

Additionally, implementing remote education methods has resulted in higher rates of single-use plastic consumption as people spend more time at home and use easily disposable options such as water bottles or food delivery packages. Knowing the ecology of such shifts in educational practices is necessary for identifying sustainable solutions and interventions to prevent further increases in plastic waste. Furthermore, the new cultural attitudes and ways of studying during the pandemic require the creation of culturally responsive methods for plastic management within education that involve different social groups with their particular needs.

#### **5.1.1.2.2 Social Distancing**

In Yaounde, social distancing practices enacted to combat COVID-19 have significantly impacted the use and disposal of single-use plastics, particularly foam packaging. This research, examines the confluence of cultural traditions and evolving public health imperatives. The shift towards social distancing has led individuals to prioritize minimizing shared surfaces and contact points, leading to a preference for disposables. Similarly, adaptations to social gatherings and feasts necessitate individual food packaging and single-use serving materials like foam boxes to comply with distancing guidelines. This trend reflects a dynamic interplay between traditional customs and contemporary concerns about hygiene and safety. Foam



containers, perceived as minimizing viral spread, have become increasingly favoured compared to other options.

Consequently, the demand for foam packaging has risen across diverse social settings, reshaping local event planning and consumer behaviour. This highlights the complex relationship between culture, commerce, and public well-being, as communities navigate the need to balance tradition with emerging scientific knowledge. Furthermore, Yaounde's reliance on foam packaging mirrors global trends, reflecting the challenges posed by the pandemic and its impact on everyday life. By examining the intersection of cultural norms and public health guidelines, this case study illuminates how evolving material culture, particularly in single-use plastic consumption and disposal, is shaped by the interplay of cultural traditions and contemporary public health concerns.

#### **5.1.1.2.3 Frequent Hand Washing**

The enhanced attention to frequent handwashing with soap as a preventive measure against COVID-19 has been manifested in hygiene habits and perceptions of cleanliness. The increased demand for soap and hand sanitisers in single-use plastic bottles has encouraged the generation of more waste plastics. In Yaounde, the confluence of cultural perceptions towards hygiene and the general use of single-use plastic hygiene products has manifested in how people relate to these commodities.

Nevertheless, there has also been a switch to using cloth for face masks, making them reusable and reducing dependence on single-use plastics. The cultural priority of hygiene and well-being has normalised single-use plastics like disposable gloves, masks, and packaging as must-have tools for cleanliness-driven health. Thus, these products are symbolically linked with safety and cleanliness, a cultural response to the dangers of infectious diseases. As a result, the day-to-day incorporation of single plastic hygiene products into social practices and daily routines reveals plastic consumption patterns based on Yaounde's health culture.

#### **5.1.1.2.4 Limiting Access to Bars and Restaurants**

Restricted bar and restaurant operations until 6 pm influenced socialising patterns and leisure activities within the city, leading to more takeaway or single-use packaging being used for beverage and food products, which increased plastic waste proliferation. These shifts in cultural patterns related to socialisation, recreation, and eating have significantly contributed to using disposable single-use plastics in social events, entertainment, and leisure activities during this pandemic.

The changes in cultural behaviours concerning socialisation, recreation, and dining have significantly increased the utilisation of disposable single-use plastics during social events, entertainment, and leisure activities amid the pandemic. These cultural practice changes, including socialising, leisure activities, and food consumption, have highlighted single-use plastic usage and disposal patterns during family occasions, entertainment gatherings, and general recreational activities amid COVID restrictions. This transformation of cultural behaviours around socialising, leisure, and food consumption has significantly impacted single-use plastics' use patterns and disposal modes. Supplementing collective behaviour during pandemic outbreaks orchestrates processes specific to entertainment and leisure activities.

Throughout the coronavirus pandemic, new eating habits were also created in Yaounde, along with changing drinking behaviour. The limitations have resulted in a reconsideration of social and spending patterns among the citizens, showing how personal decisions are naturally linked with external conditions in this period. This era has provided a moment to think about societal actors' impact driving alcohol consumption behaviour as well as dining conduct underlining personal choice during pandemics.

#### **5.1.1.2.5 Adoption of Electronic Communication in Public Administration**

Adopting electronic communications in public administrations to hold meetings and conduct official business has transformed Yaounde's workplace dynamics and administrative practices. This shift towards virtual communication has reduced the reliance on physical documents and printed materials, potentially impacting the consumption of paper and plastic bottles and bags exchanged during in-person meetings.

Cultural values related to efficiency, modernisation, and technological adaptation have influenced the adoption of digital platforms such as Google Meet, Zoom, or Skype within administrative settings in Yaounde, with implications for reducing plastic usage that may exacerbate contamination. The cultural emphasis on efficiency and modernisation has prompted a shift towards virtual communication and remote work practices, reducing the reliance on physical documents and printed materials. As administrative processes increasingly transition to digital platforms, the need for paper-based forms, reports, and memos is diminished, thereby reducing the risk of contamination. Additionally, the cultural value placed on technological adaptation has fostered a greater acceptance of digital communication tools, leading to a decreased demand for in-person, ultimately reducing plastic usage within Yaounde administrative settings.

Moreover, we shed light on the social and cultural dynamics surrounding the adoption of anti-COVID-19 barrier measures and their implications for sustainable waste management in Yaounde. Examining the social meanings and ritualised practices associated with using and disposing of protective face masks. During the COVID-19 pandemic in Yaounde, the social meanings and ritualised practices associated with using and disposing of protective face masks have become prominent. The wearing of face masks has become a visible symbol of public health consciousness and responsibility, reflecting a collective commitment to mitigating the spread of the virus.

Additionally, in social settings, the act of donning a face mask has become ritualised, signifying respect for the well-being of others and a shared understanding of the importance of infection prevention. The disposal of used face masks has garnered significance, with designated receptacles and disposal protocols emerging as part of the ritualised practices, underscoring the communal effort to manage potentially contaminated materials responsibly. These social meanings and ritualised practices surrounding face masks exemplify the cultural adaptation and collective response to the challenges posed by the pandemic in Yaounde.

#### **5.1.1.2.6 Limiting Social Gathering**

The anti-COVID-19 measures, particularly limiting social gatherings to less than 50 persons, have significantly impacted the organisation of cultural festivals, community gatherings, and village meetings in Yaounde. Traditionally, vibrant cultural festivals that serve as platforms for communal celebration, artistic expression, and the preservation of cultural heritage have been constrained by the reduced capacity for attendees. This limitation has curtailed the scale and vibrancy of these events, affecting the participation of community members and diminishing the cultural exchange and collective experience that these festivals typically foster.

Similarly, the restriction on the number of attendees has affected community gatherings and village meetings, which are integral to local governance, decision-making, and social cohesion. These gatherings often serve as forums for communal dialogue, consensus-building, and transmitting cultural knowledge and practices. The limitation on the size of these gatherings has hindered the full participation of community members, impacting the dynamics of decision-making processes and the exchange of cultural traditions and values within these settings. As a result, the fabric of communal life and cultural expression in Yaounde has been altered by the constraints imposed by the anti-COVID-19 measures, reshaping the dynamics of cultural festivals, community gatherings, and village meetings.

Different social groups' diverse responses and adaptations to anti-COVID-19 barrier measures have significant implications for plastic consumption and waste management. Students, public administrators, bar owners and customers, waste pickers, informal recyclers, and tribal group members have all been impacted differently by measures such as the momentary closure of educational institutions, limiting public gatherings, frequent hand washing, social distancing, and the use of electronic communication in public administrations.

These measures have led to shifts in consumption patterns, plastic waste generation, and recycling practices, affecting livelihoods and exacerbating social inequalities. For instance, students and public administrators have increased their reliance on electronic communication, potentially leading to a rise in e-waste. At the same time, bar owners and customers have seen changes in single-use plastic consumption due to restrictions on public gatherings. Waste pickers and informal recyclers may experience fluctuations in the availability of recyclable materials, impacting their income, and tribal group members may face challenges in adapting traditional waste management practices to the new norms. Understanding these differential impacts is crucial for developing targeted waste management strategies that address the needs and vulnerabilities of diverse social groups while promoting sustainable practices during the COVID-19 pandemic.

### **5.1.2 Informalization and Formalisation**

The blending of informal and formal approaches to enforce COVID-19 barrier measures regarding single-use plastics waste management creates a multifaceted anthropological scenario. This complex terrain involves navigating the implementation of policies alongside various challenges, economic consequences for informal plastic traders, and considerations for the environment and public health. As authorities aim to regulate the usage and disposal of single-use plastics to curb the spread of COVID-19, this study uncovers a comprehensive network of social, cultural, and economic influences. It delves into the interaction between formal regulations and informal behaviours, examines how this impacts the livelihoods of informal plastic traders, and explores the broader environmental and health implications within the local community.

#### **5.1.2.1 Policies Implementation Challenges**

Policies implementation challenges regarding single-use plastics management during the COVID-19 pandemic are deeply intertwined with cultural norms, social practices, and economic realities. Empirical inquiry reveals that enforcing policies to reduce single-use plastic usage faces resistance and adaptation rooted in cultural habits and traditions. It also allows us

to understand how deeply ingrained plastic usage practices are within Yaounde's social fabric and how policy implementation must navigate these cultural dynamics to be effective. Moreover, the diversity of cultural practices within Yaounde necessitates a nuanced approach to policy implementation, recognising that different communities may have distinct relationships with single-use plastics, requiring tailored interventions that respect local customs and traditions.

Implementing anti-Covid measures while aiming to safeguard lives unwittingly unleashed a plastic surge, creating a fresh battleground where environmental sustainability clashed with immediate health concerns. Navigating this terrain from an anthropological perspective reveals Yaounde's enormous challenges in managing single-use plastics within the pandemic's whirlwind.

#### **5.1.2.2 Economic Implications for Informal Plastic Traders**

The rise of single-use plastics during the pandemic presents economic challenges for informal plastic traders. Formalizing the sector could mean stricter regulations and financial investments, potentially threatening their livelihoods. Conversely, informalizing it hinders access to resources and market opportunities crucial for growth. A balanced approach acknowledging their contributions while promoting sustainable practices is essential. Supporting these traders with training, resources, and formalization mechanisms helps mitigate the economic risks of both approaches.

The pandemic highlighted the complex interplay between cultural beliefs, risk perception, and waste management practices. Increased reliance on disposables strained waste systems and informal recycling networks, particularly for waste pickers navigating potentially contaminated medical waste. This research reveals the need for culturally sensitive solutions that consider both public health and environmental sustainability.

Furthermore, the study exposes the economic impact of policy changes on informal plastic traders, vital to the local economy. Policy implementation needs to consider the economic consequences and provide alternative livelihoods and opportunities for those affected by changes in plastic management policies. This underscores the limitations of top-down approaches and the importance of local knowledge and community participation in battling the "plastic paradox" and forging a sustainable future.

### 5.1.2.3 Cultural Adaptation and Facemask Use During the COVID-19 Pandemic in Yaounde

The COVID-19 pandemic spurred a fascinating interplay between economic practicality, environmental concerns, and cultural adaptation in the realm of facemask usage. Initially, readily available disposable, plastic-based facemasks saw a surge in demand. However, as the pandemic persisted, the ongoing cost of disposable masks, coupled with growing environmental concerns, became increasingly apparent. This shift reflects not only economic anxieties but also a growing environmental consciousness within the community.

Entrepreneurial individuals, attuned to these evolving needs, began crafting and selling facemasks from reusable cloth. This shift towards sustainable mask-wearing not only addressed environmental concerns but also resonated with Yaounde's pre-pandemic cultural emphasis on reusables. Traditionally, communities in Yaounde prioritized the use of reusable materials, making the shift towards cloth facemasks a more culturally familiar adaptation. The marketplace, in this context, became a microcosm of the city's adaptation to the pandemic, with both economic realities and environmental concerns shaping a shift towards locally produced, culturally familiar cloth facemasks. This shift highlights the dynamic interplay between various factors in shaping cultural practices, even in the face of global public health emergencies.



**Photo 42:** Cloth Facemasks for Sale in Yaounde III  
**Source:** Mbanam Valentine, 7<sup>th</sup> May 2022

This photograph depicts a display of cloth facemasks for sale in a market stall in Melen, Yaounde III municipality. The facemasks are made from various colourful and patterned fabrics, showcasing the diverse materials and styles available to consumers. This image reflects the adaptation of local communities towards sustainable and culturally familiar alternatives to disposable facemasks during the COVID-19 pandemic.

#### **5.1.2.4 Environmental and Health Considerations**

Managing single-use plastic during the pandemic in Yaounde is complex, with both formal and informal approaches posing challenges. Formalizing the system requires building efficient waste collection and recycling infrastructure, which currently faces issues like limited capacity and improper disposal methods. However, this approach can also ensure proper handling of contaminated plastics and improve sanitation. Informal management, on the other hand, can lead to unregulated disposal, harming the environment and public health through pollution, water contamination, and increased disease risks. While it might seem easier to implement, it ultimately creates more problems.

To navigate these challenges, Yaounde needs a comprehensive approach that prioritizes sustainable waste management, public health, and addresses the specific environmental and health issues of each approach. Additionally, engaging the community and raising awareness about responsible plastic use and waste management is crucial for long-term success. Finally, considering the local environmental and cultural context is essential for developing effective and sustainable policies.

#### **5.1.2.5 Community Engagement and Participation**

The difficulties of formalising and informalising the management of single-use plastics during the anti-COVID-19 pandemic in Yaounde are closely connected to community engagement and participation. The formalisation of single-use plastics management faces challenges in community involvement as implementing formal regulations and waste management systems requires active cooperation from residents, businesses, and community organisations. Without meaningful engagement, there is a risk of resistance, non-compliance, or limited support for formal initiatives, which can hinder their effectiveness and sustainability.

On the other hand, the informalization of single-use plastics management also presents challenges regarding community engagement and participation. Informal waste management practices often operate within community networks and informal economies, and transitioning to formalised systems may require the development of trust and understanding of local dynamics and the active participation of community members who have traditionally been involved in informal waste management activities.

Where these challenges are mitigated, a comprehensive approach is applied that prioritises community engagement and participation in developing and implementing strategies for single-use plastics management. This included fostering open dialogue, building trust, and

involving community members in decision-making processes to ensure that policies and initiatives align with local needs, values, and practices. Additionally, raising public awareness by providing education on sustainable waste management practices and creating opportunities for community involvement in waste reduction and recycling efforts has enhanced the success of both formal and informal approaches to single-use plastics management during the COVID-19 pandemic in some localities like Yaounde 4.

## **5.2 Pandemic Disruptions: Covid-19 and the Reshaping of Plastic Practices**

The content discusses the increased usage of single-use plastics in healthcare settings and elsewhere in Yaounde during COVID-19. Empirical inquiry helps understand the cultural, social, and behavioural factors that have contributed to the rise in plastic consumption in healthcare facilities such as Hospitals, Clinics, and Integrated Health Centers. By studying the rituals, symbolic meanings, and everyday practices surrounding the use of single-use plastics in healthcare during the pandemic, we have gained a meaningful comprehension of how these materials have become deeply ingrained in the local healthcare culture. Furthermore, an anthropological approach can provide a nuanced understanding of the perspectives and experiences of healthcare workers, patients, and other stakeholders regarding the increased reliance on single-use plastics.

### **5.2.1 Fear, Hygiene, and the Rise of Plastics**

The COVID-19 pandemic has had a profound impact on the cultural practices of individuals and communities in Yaounde, particularly in relation to hygiene and sanitation. According to an anonymous interviewee, "The pandemic has brought about a heightened sense of fear and concern for personal hygiene, significantly contributing to the rise of single-use plastics."

She further explained that the cultural significance of cleanliness and protection has intersected with the availability and promotion of single-use plastics, leading to a notable shift in consumption patterns and waste generation. "The influence of fear of infection and the pursuit of enhanced hygiene practices on adopting single-use plastics reflects a complex interplay of cultural, social, and behavioural factors," she said.

She also noted that the rise of SuPs in response to COVID-19 reflects a complex interplay of cultural beliefs, social norms, and behavioural adaptations. "I see that people have become more concerned about cleanliness and are looking for protection against the corona-



virus. Thank God, facemasks are available and are becoming cheaper showing how Cameroonians show fear against being contaminated.” She added.

### **5.2.1.1 Symbolic Meanings and ritualised practices**

In Yaounde's neighbourhoods, single-use plastics for hygiene purposes carry symbolic meanings and follow ritualised practices. A complex interplay of cultural beliefs, social norms, and behavioural adaptations influences this. By studying this phenomenon, we can understand how the cultural significance of cleanliness and protection intersects with the availability and promotion of single-use plastics. This intersection shapes how these materials are used and perceived within the communities. Disposable plastic items like gloves, masks, and packaging have become essential components of hygiene practices, signifying a proactive approach to prevent contamination and a commitment to maintaining personal and public health.

Moreover, using single-use plastics for hygiene purposes has acquired symbolic meanings related to safety, security, and social responsibility within the context of the COVID-19 pandemic. Individuals and communities view adopting disposable plastic items as a tangible expression of their commitment to mitigating health risks and protecting themselves and others from potential infection. This symbolic association has led to the normalisation of single-use plastics as emblematic tools for maintaining hygiene and minimising the perceived threat of contagion, shaping the social and cultural landscape of everyday life in Yaounde.

Furthermore, the ritualised practices surrounding using single-use plastics for hygiene have permeated various spheres of daily life in Yaounde, including households, public spaces, and commercial settings. Incorporating disposable plastic items into hygiene routines and infection control measures has become deeply embedded in social interactions and behavioural norms, reflecting a collective response to the uncertainties and anxieties brought about by the pandemic. This ritualisation of plastic usage underscores how cultural, social, and psychological factors have converged to shape the symbolic meanings and practices associated with adopting single-use plastics for hygiene purposes in Yaounde.

### **5.2.1.2 Livelihoods Pandemic Waste Landscape**

The surge in plastic consumption during the COVID-19 pandemic has had profound implications for local waste management systems, environmental sustainability, and the livelihoods of waste pickers and informal recyclers in Yaounde. The increased use of single-use plastics has led to a significant rise in plastic waste generation, placing additional strain on

existing waste management infrastructure and exacerbating environmental challenges. This surge in plastic waste has overwhelmed local waste collection and disposal systems, leading to littering, inadequate waste processing, and potential environmental contamination, posing a threat to environmental sustainability in Yaounde.

Furthermore, the surge in plastic consumption has directly impacted the livelihoods of waste pickers and informal recyclers. With more plastic waste entering the stream, waste pickers and informal recyclers face intensified competition for recyclable materials such as plastic bottles, potentially leading to reduced income and economic insecurity. Additionally, the increased presence of single-use plastics in the waste stream may require additional sorting and processing efforts, further straining the resources and capacities of waste pickers and informal recycling networks.

The environmental sustainability of Yaounde has been compromised by the surge in plastic consumption during the pandemic. The influx of single-use plastics has overwhelmed waste management systems, leading to increased pollution, strain on landfill capacity, and challenges in proper waste disposal. This has significant implications for the local environment, including potential harm to ecosystems, water sources, and public health. Furthermore, the long-term environmental impact of the surge in plastic consumption during the pandemic may exacerbate existing environmental challenges and hinder efforts towards sustainability and conservation in Yaounde.

### **5.2.2 Shifting Social Landscapes**

The surge in single-use plastics amidst the COVID-19 pandemic has shifted social landscapes in Yaounde, reflecting changes in cultural practices, social interactions, and community dynamics. The widespread adoption of single-use plastic items, such as masks, gloves, and packaging for sanitary products, has not only altered everyday behaviours but has also reconfigured social norms and rituals, influencing how individuals engage with their environment and one another.

Ethnographic inquiry into these shifting social landscapes allows for an exploration of the cultural meanings attached to plastic usage, the renegotiation of social boundaries and interactions in public spaces, and the emergence of new forms of solidarity and social responsibility in response to the pandemic. Through our research, we have gained valuable insights into how public health crises, material culture, and social dynamics intertwine in Yaounde's urban environment. By understanding the sociocultural implications of these changes, we have uncovered a deeper understanding of their complex relationship.

During the COVID-19 pandemic, there was a noticeable shift in the traditional ways people greeted each other in Yaounde. Non-contact greetings, such as waving hands or using elbow bumps, became more prevalent as individuals sought to minimise physical contact and reduce the risk of viral transmission. Adapting to these new greeting behaviours posed a significant challenge, requiring individuals to alter deeply ingrained social habits consciously. Instances of forgetting to maintain a safe distance due to long-standing customs often led to immediate reminders from others, reflecting the collective effort to uphold the new norms of social interaction. This process of changing established greeting practices underscored the complexities of cultural adaptation and the resilience of social dynamics amidst the public health crisis in Yaounde.

#### **5.2.2.1 Public and Private Spaces**

Ms. Brigitte Nga, a nurse living in Melen, shared her insights on the impact of the COVID-19 pandemic on public and private spaces in Yaounde. According to her, "During the pandemic, public spaces that were once full of social activities and gatherings became places where people were more aware of physical distancing and took protective measures. Private spaces, like homes and residential areas, turned into safe places where people could avoid the virus."

Ms. Nga further explained that as people tried to keep social connections while also following physical distancing rules, the line between public and private spaces became blurred. She noted that the escalating death toll during the initial stages of the pandemic outbreak instilled a pervasive sense of fear and apprehension among the residents of Yaounde, leading to a heightened wariness of public spaces.

Ms. Nga also observed that the prevailing atmosphere of suspicion and heightened vigilance meant that individuals became wary of one another, with any public display of symptoms prompting heightened scrutiny and suspicion. In contrast, the home environment emerged as a safe place where individuals felt a greater sense of security, finding reassurance in the familiarity and trust associated with their household members, as opposed to the perceived risks posed by interactions with external individuals.

#### **5.2.2.2 Cultural Narratives and Perceptions**

Ms. Ambani, a laboratory technician, shared her insights on the impact of the COVID-19 pandemic on cultural narratives and perceptions in the city. According to her, "The pandemic changed the way people use to think maybe because of fear of contamination and as the media

keeps announcing a rise in the death toll. As a result, once lively centres of social interaction, public spaces became filled with apprehension as people became worried of the potential risk of contracting the virus in these environments, she responded.

She further explained that the use of SuPs in Yaounde experienced a significant change during the pandemic. She noted that the perception of disposable masks and gloves shifted from being limited to medical settings to becoming common in public spaces, reflecting a new understanding of single-use plastics as essential tools for personal protection and hygiene in the face of a health threat.

Moreso, she also observed that the pandemic transformed the perception of single-use plastics as symbols of convenience and disposability. She stated that the increased use of plastic packaging for individually packaged products or take-out food highlighted the adaptability of cultural attitudes towards SuPs in response to public health needs. However, she noted that this increased use of plastic packaging also has consequences for the environment, increasing the amount of plastic waste generated.

### **5.2.2.3 Sustainability and Transformation**

The COVID-19 pandemic has caused a reassessment of how single-use plastics are managed in Yaounde with a focus on sustainability and transformation. The pandemic has highlighted the vulnerabilities of human existence and the connection between global health and the environment, leading to a greater understanding of the importance of sustainable practices in plastic management. The increased use of single-use plastics during the pandemic, such as masks, gloves, and packaging for sanitary products, has raised concerns about their long-term environmental impact.

As a result, there is a renewed emphasis on reducing reusing and recycling single-use plastics and exploring alternative materials and waste management strategies. The pandemic has acted as a catalyst for change, prompting stakeholders to reconsider current plastic management systems and advocate for sustainable solutions that prioritise environmental health and resilience. This shift towards sustainability and transformation in single-use plastics management reflects a broader recognition of the interconnectedness of public health, environmental sustainability, and societal well-being. It represents a crucial moment for reimagining plastic usage and waste management practices in Yaounde during the COVID-19 pandemic.

### **5.2.3 Contested Narratives and Power Dynamics**

The common concern for human health and the environment has been a significant preoccupation for international NGOs. Well-thought-out, safe healthcare waste management strategies that contribute to quality people-centred care, protect patient and staff safety, and safeguard the environment have been documented and set aside for member countries to draw inspiration from. These proposals have proven to be beneficial, especially in the outbreak of an unprecedented pandemic like COVID-19.

It is worth noting that these spelt-out principles and proposals were elaborated on and drafted long before the pandemic outbreak. Implementation needs, therefore, to follow the stated guidelines in the face of the crises. Thanks to these suggestions, some member states have experienced satisfactory results. However, much still has to be done in respecting these guidelines as the alarming death rates at a steady rise attest to this, especially workers in the health and medical centres that are the most exposed to the Coronavirus.



**Photo 43:** Facemask made from long-lasting material  
**Source:** Mbanam Valentine, 15<sup>th</sup> May 2020

### **5.3 The Emergence of Single-Use Plastics Dynamics During the Covid-19 Pandemic**

The outbreak and spread of COVID-19 have increased the consumption of plastics, including gloves; face masks, shields, hand sanitizer, and disposable face masks (IBRD, 2021). The WHO, in a report published in March 2020, estimated the monthly reliance on plastic products as such; 89 million medical masks, 76 million examination gloves, and 1.6 million goggles.

#### **5.3.1 Changes in Consumer Behaviour and Consumption Patterns**

Ernest Late, a 51-year-old shopkeeper in Messa, shared his opinion on the impact of the COVID-19 pandemic on single-use plastic consumption in Yaounde. According to him, "The

pandemic has made an already massive dependence on single-use plastics worse. The importance of single-use plastics during this pandemic is very very important”.

He further explained that the pandemic has caused noticeable changes in how consumers in Yaounde behave and consume SuPs. He noted that the SuPs, such as disposable gloves, face shields, and packaging for take-out food and drinks have been used more due to fears about hygiene and virus transmission. He stated that this has led to a surge of takeout and food delivery services in Yaounde as dine-in restaurants have closed down and social distancing measures have been in place. Late also observed that the fear of contamination among consumers has resulted in an upswing toward well-packed products that lead to more SuPs. He noted that the shift in consumption trends highlights how the pandemic has affected the eating place industry through reliance on single-use plastics as a solution to contactless dining experiences.

Mr. Late, always resourceful and quick to adapt, saw the need for businesses to provide hand washing facilities in compliance with government measures during the Covid-19 pandemic. He repurposed a 10 liter plastic bottle and connected a tap to create a makeshift hand washing station. This simple yet effective solution allowed businesses to easily provide employees and customers with access to soap and running water for hand washing, helping to prevent the spread of the virus. Mr. Late's ingenuity and quick action demonstrated his commitment to keeping his community safe and healthy during challenging times.



**Photo 44:** A 10 Litre plastic bottle repurposed during the COVID-19 to wash hands  
**Source:** Mbanam Valentine, 11<sup>th</sup> April 2020

A study in Cameroon found that adherence to preventive measures, initially high, declined over time. This aligns with reports from Yaounde residents, where the intensity of

preventive measures taken has lessened. One factor contributing to increased plastic consumption during the pandemic was the shift towards "buy and go" behaviour due to social distancing. This led to a surge in demand for bottled beverages, reflecting a broader change in perception where some view single-use plastics as offering protection against the virus.

The pandemic highlighted the complex relationship between public health and environmental sustainability. While single-use plastics may offer some protection against viral transmission, they also pose significant environmental risks, especially regarding waste management and pollution. Exploring alternatives like reusable containers is crucial to balance these competing priorities and achieve a future that safeguards both human health and the planet.

Behaviours had to be re-evaluated within health centers with a high risk of contamination. Alternatives were adopted to prevent transmission from one patient to another, and single-use plastics offer this function. Packaging using single-use plastics was an excellent option to prevent cross-contamination. Unfortunately, too much dependence on these plastics led to increased waste generation. Among the respondents, nurses described their new habits as more cautious. Each time a staff member tested positive, it instilled fear in everyone.

Implementing nationwide restrictions forbidding an assembly of more than thirty people favoured the presence of fewer invitees during the celebration of events. Food and drinks are served in SuPs cups and plates during such gatherings. Some respondents said that everything they touched was suspicious during the pandemic. They feared being contaminated whenever they felt their hands could pick up the coronavirus. For this reason, they preserved serving food in objects once. This practice will reduce the risk of contamination among the invitees.

### **5.3.2 Responses of Public Administrations to the Demand for Single-use Plastics**

Public administrations, by respecting the measures of the Head of state, have adopted new practices within their place of work. In all government edifices, one can easily observe adapted devices meant for washing hands. Entry into the premises of these institutions is subject to respecting the presidential instruction. These measures are respected by the workers of these administrators and visitors who come to seek the services they offer. So far, there are no known sanctions when failing to comply with this instruction except access denial.



**Photo 45:** A device set for the washing of hands at the Yaounde VI City Council  
**Source:** Mbanam Valentine; 4<sup>th</sup> May 2020

Respecting this instruction of washing hands has been another experience where plastic waste is given a second life. Plastic bottles are used to contain locally made hand sanitizers. Because these plastic bottles are very easy to find, they are beneficial when extreme care and sanitation practices are paramount. Regular washing of hands with soap or hand sanitizers necessitates purchasing them regularly. Therefore, it becomes economical to produce them locally, and thanks to the availability of these plastics bottles, they become safer to store and keep for further use.



**Photo 46:** A locally made hand sanitizer in front of the Library of the Faculty of Medicine and Biomedical Sciences at the University of Yaounde 1  
**Source:** Mbanam Valentine, 8<sup>th</sup> June 2024

## 5.5 Plastic Waste Management Amidst the Pandemic



Plastic pollution has been a rising worldwide problem, particularly during the COVID-19 epidemic due to the usage of personal protective equipment (Hee, 2022). Different types of waste require specific waste management strategies and as of now, there is no ecologically and economically satisfactory strategy (Desachy, 2001). Land-based anthropogenic activities, such as unregulated biomedical waste disposal, have been identified as potential sources of toxic, infectious, and radioactive pollutants (WHO, 2018).

Healthcare wastes typically include cytotoxic, chemical, pathological, pharmaceutical, sharp, radioactive, and general wastes. The majority of these wastes are made of plastic, particularly sharp and general wastes such as syringes and scalpels, gloves, surgical masks, surgical and isolation gowns, face shields, shoe covers, sanitizer containers, and waterproof aprons (Nsikak et al., 2021). The COVID-19 pandemic has increased biomedical waste, specifically waste plastics. According to the WHO, low-income and high-income countries generate approximately 0.2 and 0.5 kg/day of hazardous biomedical waste, respectively (WHO, 2018).

(Nsikak et al., 2021) investigated the environmental footprints of the global plastic wastes generated during COVID-19 and analyzed the potential consequences of plastic pollution as globally, the amount of plastic waste generated since the outbreak was estimated to be 1.6 million tons per day. They estimate that due to the COVID-19 pandemic, approximately 3.4 billion single-use facemasks/face shields are discarded globally daily. However, since the coronavirus pandemic began, there has been an unprecedented increase in single-use plastics such as gloves, protective medical suits, masks, hand sanitizer bottles, takeout plastics, food and polyethylene goods packages, and medical test kits (Nsikak et al., 2021).

Nsikak et al., (2021) presented a framework for estimating the number of facemasks generated daily by the global population living in urban and semi-urban areas during the COVID-19 pandemic. COVID-19 infection is crucial and tenacious because of its capacity to survive on particular objects of everyday use in our environment. Once a person has been declared COVID-19 positive, they are immediately quarantined because they represent a risk of contamination to others.

They also calculated the volume of plastic waste generated each day and by the end of 2020 and also discussed the impact of the COVID-19 pandemic on the consumption and disposal of single-use plastics generated by healthcare facilities, quarantine facilities, home and hotel isolation facilities, and other sources during COVID-19 patient management. Waste management experts from the UNEP have been conducting several studies on mitigating

strategies to avert the widespread pandemic and reduce the number of deaths. This has led to a diagnosis of the spread of the pandemic via waste management or handling, especially SuPs waste. As a result, existing waste collection and management procedures must be thoroughly revised to eliminate the potential threat of SARS-CoV-2. Improper management of SARS-CoV-2 wastes, such as littering, disposal in uncontained landfills, and open dumping, could exacerbate the pollution caused by existing marine litter (Nsikak et al., 2021).

By May, the outbreak of the Pandemic had reached a worrying threshold, with an alarming level of 5,000 cases of infection in Cameroon (Ngounou, 2020).

Yaounde, it should be noted, is the country's main epicentre of the pandemic. Due to the high rate of spread, a health safety protocol has been put in place by HYSACAM, the leading hygiene and Sanitation Company. The aim is to contain the spread of the pandemic at the household level.

The vulnerable persons here are the workers of the company and the households. The link between these two groups is waste. To safeguard garbage collectors and households, HYSACAM initiated a specific protocol on May 25th, 2020. The protocol specified coronavirus prevention in Yaounde's waste collection and treatment sector. During an interview granted to the Afric21 press, the head of operations of the HYSACAM Yaounde branch, Mr. Frederick Nyobè, had this to say;

*“We have increased the number of garbage bins as well as the rotation of our trucks in the neighbourhoods to reduce the length of time garbage remains in households” (Afric21 Press).*

Besides being exposed to the pandemic by transporting garbage bins, workers doing door-to-door operations in the neighbourhoods are most likely to be contaminated because of the proximity to household members whom the coronavirus might contaminate. The company isolates these due to difficulty in accessing some neighbourhoods. They are somewhat left on their own and must consider the risk of exposure to which they are exposed. Apart from collecting waste from these interior households, they also pick waste in gutters and other spontaneous places.

The company has modified its work practices in waste treatment. They have suspended the sorting of waste in its landfill at Nkolfoulou. To limit contamination risk, their nearly 400 garbage bins are systematically washed and impregnated with disinfectant each time they are carried to the landfill sites. High-risk areas, such as waste dump sites close to health centres,

are given special treatment. An example is when a garbage collector sprays chlorinated water mixed with “javel” water on a garbage bin in front of Yaounde's emergency centre, located beside the central hospital.

Safety measures have to be taken very seriously, especially if it can be admitted that hospital waste like surgical masks, gloves, and syringes can inadvertently find themselves in these waste bins that are mostly set to contain household waste. Because of these safety measures, the company can boast of not having a single worker detected positive for COVID-19 out of the over 500 workers. It is also thanks to the collaboration of the household that it owes this glaring situation of zero contamination. Therefore, HYSACAM sensitizes the population by calling on them for more collaboration and suggesting safety measures for their protection. For example, they are advised to remove protective masks or hospital waste by wrapping them in plastic bags before throwing them in the garbage.

#### **5.4 The Challenges Faced During the COVID-19 Pandemic**

With the advent of COVID-19, Health Centres and healthcare facilities have seen an increase in waste generation compared to before the pandemic. These wastes are diverse, including masks, gloves, and other protective equipment that could be infected with the virus. SuPs is not left out as a significant increase in these plastics wastes is also being produced. Patients in confinement Centres are supplied with mineral water packaged in plastic bottles. The rate at which this supply is done increases day after day to satisfy the ever-increasing demand.



**Photo 47:** Plastic launch boxes for patients in a Clinic  
**Source:** Mbanam Valentine, 13<sup>th</sup> April 2020

COVID-19 confinement centres use various single-use plastics for food packaging. Thicker plastic bags, previously encouraged for reuse, are now discarded due to contamination concerns. Disposable foam containers are favoured to minimize contact with contaminated surfaces. These practices significantly increase plastic waste generation during the pandemic. Unsound waste management practices pose various health and environmental risks. Uncontrolled dumping of infected medical waste, including plastics, can spread the virus and harm the public. Open burning of waste releases harmful toxins and pollutes the air. Dumping contaminated waste near water bodies pollutes aquatic ecosystems and potentially harms marine life. These practices highlight the pressing need for improved waste management strategies.

Existing waste management infrastructure and resources are insufficient to handle the increased volume of waste generated during the pandemic. Waste management workers face an increased risk of exposure to contaminated waste. The United Nations Environment Programme (UNEP) recommends maximizing available waste management solutions while minimizing environmental impact. Implementing the "3S" strategy (sorting, segregation, and storage) for effective treatment of COVID-19 waste is crucial. Addressing these challenges requires collaboration between policymakers, waste management companies, and the public to implement sustainable waste management practices and raise awareness to mitigate the environmental and health risks associated with increased plastic waste during the pandemic.

### **5.5.1 Impact of Increased Plastic Usage**

During my fieldwork in Yaounde amidst the COVID-19 pandemic, I observed a notable surge in the consumption of single-use plastics within healthcare settings and the broader community. In healthcare facilities, the demand for personal protective equipment (PPE) such as disposable gloves, masks, and gowns skyrocketed due to heightened infection control measures. This surge in plastic usage was further compounded by the increased reliance on single-use plastic packaging for medical supplies and pharmaceutical products to minimize the risk of contamination.

Beyond healthcare settings, the general public also exhibited a heightened reliance on single-use plastics, driven by concerns over hygiene and safety. Disposable masks, gloves, and plastic packaging for food and other essential items became ubiquitous in everyday life, reflecting a shift towards a more disposable-oriented consumption pattern. The implications for waste management were profound. The surge in plastic consumption led to a significant

increase in medical plastic waste, placing additional strain on already overburdened waste management systems. Improper disposal of single-use plastics, including PPE, further exacerbated environmental and public health concerns, as these items often ended up in open dumps or informal waste sites, posing risks of contamination and pollution.

This surge in plastic consumption during the pandemic highlighted the urgent need for improved waste management strategies that could accommodate the increased volume of medical plastic waste. It also underscored the importance of addressing the environmental and public health implications of heightened plastic usage, particularly in the context of infectious disease management. My research in Yaounde shed light on the complex interplay between public health crises, plastic consumption, and waste management, emphasizing the need for holistic and sustainable approaches to single-use plastics management in the face of global health emergencies.

### **5.5.2 Challenges and Opportunities**

The surge in single-use medical plastics like gloves and masks due to the pandemic has overwhelmed Yaounde's waste management system. Limited infrastructure and resources struggle to handle the increased volume, leading to overflowing landfills and improper disposal practices. The urgency of addressing the pandemic has sometimes led to prioritizing short-term solutions over long-term environmental consequences.

However, there is hope. Local initiatives are repurposing medical plastic waste, turning them into eco-bricks for construction or raw materials for artisans. These initiatives address the immediate waste issue while contributing to the community and local economy. Additionally, integrating technology and data-driven approaches can optimize waste collection, sorting, and recycling. Leveraging digital platforms and innovative technologies can enhance the efficiency and sustainability of managing plastic waste during the pandemic. Research in Yaounde highlights the urgency of addressing the challenges of managing medical plastic waste. While significant obstacles exist, promising opportunities for innovation and improvement offer the possibility of building more sustainable and resilient waste management systems for the future.

### **5.5.3 Environmental and Public Health Concerns:**

The increased use of single-use plastics, especially in healthcare and daily life, has posed significant environmental and public health challenges in Yaounde. Indiscriminate disposal has led to plastic accumulating in waterways, open spaces, and dumpsites, causing environmental

degradation and harming local ecosystems. Burning plastic releases harmful fumes and air pollution, impacting respiratory health, particularly during a pandemic.

The proliferation of plastic waste also affects public health. Improperly managed waste can become breeding grounds for disease and compromise hygiene, especially in densely populated areas. Additionally, inadequate disposal of medical plastic waste raises concerns about exposure to infectious materials for waste handlers and the public. These challenges are exacerbated by limited recycling infrastructure and a lack of comprehensive waste management systems. The absence of formal recycling and collection hinders efforts to lessen the environmental impact of plastic waste and limits sustainable practices.

Addressing these issues requires a multi-faceted approach. Engaging the community, implementing policy interventions, and developing infrastructure are crucial. Promoting responsible disposal, improving recycling facilities, and raising public awareness about the environmental and health consequences of plastic pollution are essential to mitigate the adverse effects of heightened plastic waste generation in Yaounde during COVID-19.

#### **5.5.4 Policies and Regulatory Considerations**

After conducting extensive fieldwork in Yaounde during the COVID-19 pandemic, it is evident that existing policies and regulations governing plastic waste management faced significant challenges. The surge in single-use plastics, particularly in healthcare settings, has strained the capacity of current waste management systems. This has led to an increased environmental burden and public health concerns.

In light of these observations, it is imperative to propose potential strategies for more effective management of single-use plastics during and beyond the pandemic. Drawing from the insights gained through ethnographic research, it is clear that a multi-faceted approach is necessary. Firstly, there is a need for enhanced collaboration between governmental bodies, local communities, and healthcare institutions to develop and implement tailored policies that address the unique dynamics of plastic waste generation during health crises. This may involve the establishment of specific guidelines for the segregation, collection, and disposal of medical plastic waste.

Secondly, community engagement and education programs are essential for promoting responsible plastic waste management practices. This includes raising awareness about the environmental and public health impacts of improper disposal and providing guidance on recycling and sustainable alternatives to single-use plastics.

Furthermore, integrating innovative technologies and infrastructure for plastic waste management, such as advanced recycling facilities and decentralized waste processing units, could significantly improve the overall management of single-use plastics in the pandemic.

In conclusion, managing single-use plastics during the COVID-19 pandemic requires a holistic and adaptive approach considering the intersection of public health, environmental sustainability, and community participation (Karma, 2018). By examining and addressing the existing policies and regulations within this framework, it is possible to develop more effective strategies that mitigate the environmental impact of increased plastic usage while ensuring the well-being of local populations.

### **5.5.5 Community Engagement and Education:**

Amidst the COVID-19 pandemic, the fieldwork conducted in Yaounde revealed the vital role of public awareness and community involvement in managing plastic waste sustainably. Mr. Mekoulou Oyono, a waste picker from the Nkolmesseng neighbourhood, shared his insights on this matter, stating, "The local people's understanding of plastic waste, especially SuPs, and its impact on the environment and public health significantly affects how they dispose of it. I've found that many are unaware of the long-term effects of improper disposal and the potential for recycling and responsible waste management."

Mr. Oyono emphasized the importance of promoting public awareness as a key strategy for managing plastic waste. He noted that utilizing various communication channels, such as community meetings, educational workshops, and social media, can effectively disseminate information about the environmental impact of single-use plastics and the benefits of recycling, thereby raising awareness and fostering a sense of environmental responsibility among the population.

In addition, Mr. Oyono highlighted the critical role of community involvement in shaping sustainable plastic waste management practices. He said,

*"En faisant participer les populations au nettoyage, au recyclage et au tri des déchets, nous pouvons les responsabiliser et les impliquer dans la gestion des déchets. Cette démarche collaborative donne du pouvoir à la communauté et favorise un engagement commun pour lutter contre la pollution plastique et promouvoir des pratiques durables."*

He said by actively involving local residents in cleaning initiatives, recycling programs, and waste separation efforts, we can cultivate a sense of ownership and responsibility towards

waste management. This participatory approach empowers the community and promotes collective commitment to reducing plastic pollution and encouraging sustainable practices.

Based on these observations, potential approaches for promoting responsible disposal and recycling practices in Yaounde, as suggested by Mr. Oyono, include the establishment of community-led recycling centers, the implementation of educational campaigns targeting different age groups, and the integration of waste management education into school curricula. These initiatives aim to instill a culture of environmental stewardship and sustainable plastic waste management within the community, thereby contributing to the region's long-term mitigation of plastic pollution. Mr. Oyono, who often participates in community clean-up initiatives and promotes responsible waste management practices, plays a crucial role in this process.

## **5.6 The Plastic Ban Controversy**

Implementing the ban on single-use plastic bags in 2014 marked a significant step towards curbing environmental pollution and promoting sustainability. However, the arrival of the COVID-19 pandemic in 2020 introduced a new layer of complexity, sparking controversy around the ban's impact on hygiene and public health. While the initial intention of the ban was to reduce plastic waste and its detrimental effects on the environment, concerns arose regarding the potential risk of virus transmission through reusable bags and the perceived necessity of single-use plastics for maintaining hygiene standards during the pandemic. This intersection of environmental policies and public health imperatives underscored the need for a nuanced approach that addresses both environmental sustainability and public health concerns, prompting a reevaluation of strategies for managing plastic use in the context of infectious disease control.

### **5.6.1 Arguments for the Ban**

Supporters of the plastic ban in Yaounde advocate for implementing this policy to combat the negative ecological consequences of single-use plastic waste. They stress the urgency of taking decisive action to protect the environment and improve public health. Proponents believe that the ban would encourage the adoption of eco-friendly alternatives, leading to a reduction in plastic pollution and improved air quality. Moreover, they assert that the ban would create jobs in the manufacturing and distributing biodegradable substitutes, thus boosting the green economy. Many supporters also appreciate the government's commitment to educating the population about the ban's benefits and assisting affected industries. Overall,



proponents of the plastic ban in Yaounde believe it represents a step forward in building a greener, healthier, and more prosperous future for the country.

#### **5.6.1.1 Hygiene Concerns**

Among the proponents of the ban, Ambani highlighted the potential risks associated with using reusable plastic bags, stating that “they could act as reservoirs for viruses and bacteria, increasing the risk of COVID-19 transmission,” Again, she argued that minimizing the use of reusable plastic bags is crucial for public health, as their porous nature and ability to retain pathogens present legitimate concerns about hygiene and the spread of diseases. She emphasized the need to reevaluate the trade-offs between sustainability and hygiene, especially in the context of the pandemic, as these intersecting issues highlight the evolving dynamics of plastic regulation in the face of global health crises..

#### **5.6.1.2 Environmental benefits**

The environmental benefits of the ban remained undeniable, with supporters highlighting the reduction in plastic waste pollution in waterways and landfills. During my fieldwork in Yaounde amidst the COVID-19 pandemic, proponents of the ban emphasized the positive impact on the local environment, citing a noticeable decrease in plastic debris in water bodies and urban landscapes. Furthermore, advocates underscored the long-term ecological advantages of reducing single-use plastic consumption, pointing to preserving biodiversity and mitigating environmental degradation.

However, amidst the pandemic, hygiene and public health concerns emerged as a focal point of contention. Critics of the ban raised apprehensions about the potential risk of virus transmission through reusable bags and other alternatives, particularly in the context of heightened attention to hygiene practices during the COVID-19 crisis. This tension between environmental conservation and public health imperatives underscored the complex interplay of policies, public perception, and practical considerations in the management of plastic use in Yaounde.

#### **5.6.1.3 Economic Opportunities**

Proponents of the ban emphasized the imperative to mitigate environmental degradation and reduce plastic pollution, highlighting the long-term ecological benefits of transitioning away from single-use plastics. Furthermore, they underscored the potential for job creation in producing and distributing sustainable alternatives like reusable bags, framing the ban as an opportunity to stimulate local economies and foster innovation in eco-friendly packaging

solutions. However, amidst the pandemic, concerns regarding hygiene and public health emerged as a prominent counter-narrative, with some stakeholders expressing apprehension about the perceived risks associated with reusable bags and advocating for the temporary reinstatement of single-use plastics to uphold stringent hygiene standards. This juxtaposition of environmental sustainability and public health imperatives underscores the complex and evolving nature of the plastic ban discourse in Yaounde, reflecting the intersection of environmental policies, economic considerations, and public health priorities within the local context.

### **5.6.2 Arguments Against the Ban**

Opposition to the plastic ban in Yaounde arises from various perspectives, with some stakeholders expressing concerns about the potential economic repercussions on small businesses reliant on plastic packaging. Critics argue that the ban could lead to job losses and financial strain for vendors dependent on affordable plastic packaging and storage materials. Additionally, there are apprehensions about the feasibility of transitioning to alternative eco-friendly options, citing potential challenges in cost, availability, and consumer acceptance. Some voices against the ban highlight the need for a gradual phase-out approach and comprehensive support mechanisms to assist businesses in adapting to sustainable practices without compromising their livelihoods.

#### **5.6.2.1 Hygiene Concerns**

Opponents argued that the ban limited access to readily available, affordable bags for hygiene purposes, potentially hindering proper sanitation practices during the pandemic. Through my fieldwork, I encountered a prevailing sentiment among certain population segments that the prohibition of single-use plastic bags impeded their ability to conveniently and hygienically manage their groceries and personal items, particularly in the context of heightened health precautions necessitated by the pandemic. This perspective underscored the intersection of environmental policies and public health imperatives, revealing the complex and multifaceted nature of the plastic ban's impact on everyday practices and perceptions of hygiene amidst the challenges posed by COVID-19.

#### **5.6.2.2 Economic Hardship**

It became evident during my fieldwork that some perceived the ban as an additional burden on struggling communities, particularly informal vendors who relied on plastic bags for packaging and affordability. The ban posed economic challenges for these vendors, as they had

to seek alternatives, often more expensive, packaging materials, which impacted their profit margins and affordability for their customers. This economic hardship was compounded by the existing socio-economic vulnerabilities exacerbated by the COVID-19 pandemic, which heightened resistance to the ban among certain population segments. Understanding these economic implications and the perspectives of those directly affected by the ban is crucial for comprehensively addressing plastic regulation's complexities and its impact on local livelihoods.

### **5.6.2.3 Limited alternatives**

It became evident during my fieldwork that concerns were raised about the availability and affordability of reusable alternatives, particularly among small scale businesses. The ban on single-use plastics prompted a discourse surrounding the practicality of transitioning to reusable options, as many individuals and families, especially those with limited financial means, faced challenges in accessing affordable and durable alternatives to single-use plastic products. This issue was particularly pronounced in marginalized urban areas, where the availability of sustainable alternatives was limited, and the cost of reusable items posed a significant barrier. The perceived lack of accessible alternatives underscored the socioeconomic dimensions of the plastic ban, highlighting the need for inclusive and context-specific strategies that consider the diverse socio-economic realities of the population in Yaounde.

### **5.6.3 Navigating the Controversy**

The government found itself in a delicate balancing act, addressing pressing public health concerns while simultaneously upholding the environmental goals of the plastic ban. The ban on SuPs was initially implemented as a proactive measure to mitigate environmental pollution and promote sustainable practices. However, with the emergence of the COVID-19 pandemic, the focus shifted to safeguarding public health, particularly about the potential virus transmission through reusable items and the perceived necessity of single-use plastics for maintaining hygiene standards.

The situation required a careful approach that balanced the need for environmental protection with urgent public health concerns due to the pandemic. The government had to navigate this complex situation, considering the various impacts of its policies on both environmental sustainability and public health. They also had to work with different groups to ensure that the measures implemented were effective and fair for everyone involved.

This delicate balancing act highlighted the complex relationship between environmental issues and public health, emphasizing the importance of flexible and inclusive policymaking as challenges continue to evolve. In simpler terms, the government had to balance protecting the environment with addressing public health concerns during the pandemic. They had to consider the impact of their policies on both areas and work with different groups to ensure fairness and effectiveness. This situation showed the importance of flexible and inclusive policymaking as challenges change.

#### **5.6.3.1 Distributing Reusable Bags**

The government found itself in a delicate balancing act, addressing pressing public health concerns while simultaneously upholding the environmental goals of the plastic ban. In response to the challenges posed by the ban and the emergence of the COVID-19 pandemic, government initiatives were implemented to mitigate the impact on low-income communities. One such measure involved the provision of subsidized or free reusable bags to these communities, recognizing the importance of ensuring access to affordable and hygienic alternatives to single-use plastics. By offering reduced or no-cost reusable bags, the government sought to alleviate the economic burden on low-income residents while promoting and adopting sustainable and environmentally friendly practices. This approach addressed the immediate concerns surrounding hygiene and public health. It underscored the government's commitment to fostering inclusive and equitable solutions in pursuing environmental and social objectives.

#### **5.6.3.2 Promoting hygiene practices:**

In response to the pandemic, public education campaigns were strategically designed to emphasize the importance of proper handwashing and other hygiene measures to mitigate the spread of the virus and the responsible use of reusable bags as an alternative to single-use plastics. By integrating messaging on public health and environmental conservation, these campaigns sought to foster a comprehensive understanding among the population, highlighting the interconnectedness of individual actions in safeguarding public health and the environment. This approach reflected a nuanced recognition of the multifaceted challenges posed by the pandemic and the plastic ban, underscoring the government's commitment to promoting sustainable practices while prioritizing public health imperatives during this critical period.

#### **5.6.3.3 Supporting sustainable alternatives**

In response to this challenge, strategic meetings were held with manufacturers involved in the production and distribution of affordable, compostable alternatives, such as paper bags,

as a means of mitigating the adverse effects of single-use plastics on the environment while also addressing the heightened focus on hygiene and public health during the COVID-19 pandemic. By promoting the adoption of compostable alternatives, the government sought to offer a viable middle ground that catered to environmental sustainability and public health imperatives, recognizing the need for pragmatic solutions that resonate with the local context.

This approach demonstrated a commitment to navigating the complexities of the plastic ban controversy. It underscored the government's responsiveness to the multifaceted challenges posed by the intersection of environmental policies and public health priorities in Yaounde. The plastic ban controversy in Yaounde during COVID-19 highlighted the complex interplay between environmental protection, public health, and economic realities. While challenges remain, finding sustainable solutions and promoting responsible behaviours are crucial for a healthier and cleaner future in Yaounde.

## **5.7 Post-Pandemic Era**

Exploring the post-COVID-19 dynamics of single-use plastics, focusing on health, environmental impacts, and behavioural changes. Through rigorous research, it delves into shifts in plastic usage behaviours, waste management strategies, policies, and community attitudes in urban areas like Yaounde. This study aims to contribute to understanding and improving sustainable waste management practices in the wake of global health crises.

### **5.7.1 Increased Demand and Consumption**

The COVID-19 pandemic catalyzed an unprecedented surge in the demand for single-use plastics, notably driven by the imperative for personal protective equipment (PPE) such as face masks and gloves. This heightened demand was evident not only within medical facilities, where stringent hygiene protocols necessitated the widespread use of disposable PPE to mitigate infection risks among healthcare workers and patients, but also permeated throughout general society. Individuals across various sectors and communities increasingly turned to SuPs as essential tools for safeguarding personal health and minimizing potential transmission of the virus. Consequently, production facilities scaled up their output of disposable PPE to meet the soaring demand, exacerbating concerns about plastic waste generation and environmental sustainability. This situation highlights the complex relationship between public health priorities and the environmental impact of increased single-use plastic usage during times of crisis.

During the pandemic, shifts in consumer behaviour had a profound impact on the consumption patterns of single-use plastics. With hygiene concerns at the forefront of people's minds, there was a noticeable preference for individually wrapped products, driven by a perceived sense of safety and cleanliness. This inclination towards individually wrapped items extended across various sectors, including groceries, household goods, and personal care products, as consumers sought packaging that minimized potential exposure to contaminants. Additionally, the surge in online shopping, spurred by lockdown measures and social distancing protocols, further fueled the demand for single-use plastics, as products were often packaged individually for shipping purposes. This shift in consumer behaviour not only underscores the prioritization of hygiene but also highlights the intricate relationship between public health considerations and environmental sustainability. As such, understanding and addressing these evolving consumption patterns are essential for devising effective strategies to mitigate the environmental impact of single-use plastics in the post-pandemic landscape.

### **5.7.2 Environmental Impact**

Changes in consumer behaviour during the COVID-19 pandemic had a profound impact on the consumption patterns of SuPs. Specifically, the heightened preference for individually wrapped products and increased reliance on online shopping emerged as prominent trends shaping plastic consumption dynamics. Concerns surrounding hygiene and safety prompted consumers to gravitate towards individually wrapped items, perceiving them as a more sanitary option amidst the uncertainty of the pandemic. Similarly, the surge in online shopping, driven by social distancing measures and lockdown restrictions, led to a surge in the demand for single-use plastic packaging used for shipping and delivery purposes. These shifts in consumer behaviour underscored the complex interplay between public health considerations and environmental sustainability, highlighting the need for innovative solutions to address the escalating use of single-use plastics in the post-pandemic era.

The surge in plastic consumption post-COVID-19 has raised concerns about its long-term environmental effects, emphasizing the urgent need for sustainable waste management practices and policy interventions. This heightened plastic usage, driven by hygiene concerns and single-use items, exacerbates existing challenges of plastic pollution and resource depletion. Action is imperative, including adopting circular economy principles, promoting reusable alternatives, and enhancing recycling infrastructure. Collaboration among governments, industries, civil society, and consumers is essential for a resilient and environmentally conscious future.

### **5.7.3 Waste Management Challenges**

During the pandemic, disruptions in waste management systems posed challenges for recycling and proper disposal of single-use plastics, resulting in increased littering and reduced recycling rates. Staffing shortages, operational constraints, and global supply chain disruptions compounded the issue. As a result, single-use plastics accumulated in various environments, highlighting the need for comprehensive strategies to promote sustainable waste management practices in the post-pandemic era.

The COVID-19 pandemic underscored the urgency of addressing waste management practices to mitigate the environmental impact of increased plastic waste post-pandemic. Lockdowns and heightened hygiene measures led to a surge in single-use plastics consumption, exacerbating waste disposal challenges. This highlighted the need for holistic approaches that balance public health and environmental sustainability. Stakeholders are increasingly recognizing the importance of investing in sustainable waste management infrastructure and promoting circular economy principles to address this issue effectively.

### **5.7.4 Policy Responses**

Policy responses to the increase in plastic waste post-COVID-19 vary globally, with some countries implementing bans on certain single-use plastics to reduce environmental harm. Other approaches include regulations, taxation, and incentives for sustainable alternatives. These strategies highlight the need for tailored policies to address plastic pollution effectively, alongside efforts to enhance recycling infrastructure and promote awareness.

In the post-pandemic era, there are calls for implementing extended producer responsibility schemes, landfill taxes, and deposit-refund systems to incentivize recycling and reduce plastic pollution. These measures aim to hold manufacturers accountable for their products' life cycles, discourage landfill disposal through taxes, and encourage recycling by offering refunds for returned packaging. Overall, these strategies aim to shift the burden of plastic waste management onto producers and consumers, promoting a more sustainable approach to plastic consumption and disposal.

In the context of Yaounde, these dynamics post-COVID-19 may have influenced plastic consumption patterns, waste management practices, and policy developments. Understanding these dynamics is crucial for implementing effective strategies to address the environmental implications of increased single-use plastics usage during and after the pandemic

**CHAPTER SIX:  
CULTURE AND MANAGEMENT OF SINGLE-USE PLASTICS**



This chapter thoroughly examines the viewpoints of different stakeholders involved in managing single-use plastic waste. By investigating the opinions of households, businesses, waste pickers, recyclers and waste management institutions, we aim to understand the cultural factors influencing the management of single-use plastics in Yaounde. In our exploration of "Plastic Pathways: Cultural Perspectives and Circular Economy Strategies in Yaounde's Single-Use Plastics Waste Management" we aim to shed light on the various cultural perspectives and practices related to plastic waste while also considering the potential of circular economy strategies to promote sustainable waste management in the city.

## **6.1 Consumers and Households**

Consumers and households play a pivotal role as their consumption patterns, waste disposal practices, and cultural attitudes towards plastics significantly influence the local dynamics of plastic waste management. Studying how consumers and households actually behave and perceive things reveals how socio-economic factors, cultural norms, and environmental awareness all play a role in shaping their use of single-use plastics. By delving into the everyday practices and rituals surrounding plastic use and disposal, we gain valuable insights into the deeply ingrained cultural and social dimensions that underpin the management of single-use plastic waste at the household level in Yaounde.

### **6.1.1 Domestic Waste Sorting and Disposal Methods**

In Yaounde, domestic waste sorting and disposal methods are integral to this ethnographic research of single-use waste management. The practices and rituals surrounding waste sorting and disposal reflect the practical aspects of waste management and the community's cultural, social, and economic dynamics. The introduction of single-use plastics, necessitates a deeper understanding of how these materials are integrated into existing waste management practices.

In Yaounde, the effectiveness of plastic sorting and separation in waste management is currently limited. However, there is hope that conventional waste sorting and separation methods will be practiced more extensively in the future. This shift towards conventional methods signifies a potential transition towards more structured and systematic approaches to plastic waste management, which could involve improved collection systems, sorting facilities, and recycling initiatives. As the awareness of environmental concerns grows and the need for sustainable waste management becomes more pressing, the adoption of conventional methods for plastic sorting and separation holds promise for enhancing the overall effectiveness of waste management practices in Yaounde. The photo below shows how household waste is disposed in a unique waste bag without practicing waste segregation.



**Photo 48:** Household Waste Management: Temporary Waste Storage in Reusable Bag  
**Source:** Mbanam Valentine, 5<sup>th</sup> March 2020

### 6.1.2 Cultural Influences on Household Plastic Waste Management

Cultural influences have a big impact on how households manage plastic waste. Cultural norms, traditions, and beliefs affect how households interact with and handle plastic waste. These cultural influences can be seen in different ways, such as using certain types of plastic packaging for traditional food preservation, including plastic items in cultural ceremonies and rituals, and how social norms affect the disposal of plastic waste.

In the ethnographic study of household plastic waste management in Yaounde, it was important to consider the complex relationship between cultural practices and the use, reuse, repurpose, and disposal of plastic items within the home. In simpler terms, cultural influences play a significant role in how households manage plastic waste. This can be seen in how cultural norms and traditions affect the use and disposal of plastic items. The study of household plastic waste management in Yaounde had to take into account the intricate relationship between cultural practices and plastic waste management within the home.

#### **6.1.2.1 Cultural Narratives and Perceptions**

Cultural narratives and perceptions around waste, convenience, and responsibility are deeply intertwined with traditional values, urban lifestyles, and environmental awareness. The concept of waste is often viewed through the lens of resourcefulness and frugality, where items are repurposed or reused to minimize wastage. For example, plastic containers from food products are often repurposed for storage or as makeshift household items, reflecting a cultural emphasis on practicality and sustainability.

Convenience, on the other hand, is increasingly associated with modernization and urbanization. Adopting single-use plastics, such as plastic bags for packaging, is often perceived as a convenient solution for busy urban lifestyles. Responsibility towards waste management is a complex narrative in Yaounde. While there is a growing awareness of environmental issues, socio-economic factors often influence individual responsibility for waste disposal and recycling. For instance, informal waste pickers play a crucial role in recycling efforts, highlighting the communal responsibility for waste management within certain socio-economic strata.

#### **6.1.2.2 Alternative Practices and Challenges**

Observing alternative practices and challenges households face for plastic reduction and waste disposal in Yaounde reveals a complex landscape shaped by cultural, economic, and infrastructural factors (Chasse, 2018). One alternative practice involves using traditional woven baskets or reusable cloth bags for shopping, aiming to reduce reliance on single-use plastic bags. However, challenges arise due to the convenience and ubiquity of plastic bags in urban markets, making the transition to alternatives difficult.

Once more, the absence of a robust recycling system creates a major hurdle in proper waste management, leaving households in Yaounde with limited options for recycling plastic materials. These instances highlight the delicate balance between adopting alternative methods

and the ongoing struggles that households encounter in Yaounde as they strive to reduce plastic usage and manage waste in line with their cultural and environmental surroundings.

## **6.2 Commercial Enterprises and Single-Use Plastic Management**

Commercial enterprises in Yaounde play a significant role in managing single-use plastics within the city. Many businesses, including supermarkets, restaurants, and street vendors, are key contributors to the proliferation of single-use plastics. For example, supermarkets often distribute groceries in single-use plastic bags, while restaurants and food vendors use disposable plastic containers and utensils for takeout orders. Despite this prevalent usage, some commercial enterprises have started implementing initiatives to reduce single-use plastics. For instance, certain supermarkets like Santa Lucia have introduced reusable shopping bags or require customers to bring their bags like in CONGELCAM.

Additionally, some restaurants have transitioned to biodegradable or compostable food packaging as an alternative to traditional single-use plastics. However, challenges persist, particularly in the informal sector, where street vendors may have limited access to or awareness of sustainable packaging alternatives. Overall, the engagement of commercial enterprises in Yaounde with single-use plastic management reflects a complex interplay between convenience, consumer behaviour, and environmental responsibility.

### **6.2.1 Retail Packaging and Plastic Waste Generation**

Retail packaging significantly contributes to plastic waste generation by businesses in Yaounde. Many retail establishments rely on single-use plastic packaging for their products, leading to a substantial environmental impact. For example, supermarkets often use plastic bags for packaging groceries, and plastic wrapping for individual or bulk items is prevalent in various retail outlets. This widespread reliance on plastic packaging contributes to the accumulation of plastic waste in the city. Additionally, the rise of e-commerce has further amplified the use of plastic packaging for shipping and delivery of goods, adding to the overall plastic waste generated by businesses in Yaounde. While some businesses have started to explore alternatives such as biodegradable packaging or reusable containers, the scale of plastic waste generation from retail packaging remains a significant challenge for effective waste management in the city.

### **6.2.2 Business Perspectives on Sustainable Plastic Management**

Businesses in Yaounde are increasingly recognizing the importance of sustainable plastic management in the context of plastic waste. Many companies are beginning to adopt

environmentally conscious practices to address the challenges posed by plastic waste. For example, some businesses are exploring using biodegradable or compostable packaging materials as alternatives to traditional plastics. Additionally, there is a growing trend of businesses promoting reusable products and offering incentives for customers to reduce single-use plastic consumption. Furthermore, certain companies are investing in recycling infrastructure and partnering with waste management organizations to facilitate the proper disposal and recycling of plastic waste. These initiatives reflect a shifting business perspective towards more sustainable plastic management practices in Yaounde, signaling a growing awareness of environmental responsibility and the need to mitigate the impact of plastic waste on the local ecosystem.

### **6.2.3 Sustainable Plastic Management Practices Among Businesses**

Businesses in Yaounde are increasingly recognizing the importance of sustainable plastic management in the context of plastic waste. Many companies are beginning to adopt environmentally conscious practices to address the challenges posed by plastic waste. For example, some businesses are exploring using biodegradable or compostable packaging materials as alternatives to traditional plastics. SOFAMAC, a plastic manufacturing company in Yaounde has prospects for implementing this shift. Additionally, there is a growing trend of businesses promoting reusable products and offering incentives for customers to reduce single-use plastic consumption. Furthermore, certain companies are investing in implementing the EPR engagement like the main Brewery Company “Brasseries du Cameroon” by encouraging recycling infrastructure and partnering with waste management organizations like Namé Recycling to facilitate the proper disposal and recycling of plastic waste. These initiatives reflect a shifting business perspective towards more sustainable plastic management practices in Yaounde, signaling a growing awareness of environmental responsibility and the need to mitigate the impact of plastic waste on the local ecosystem.

### **6.3 Informal Waste Pickers and Recyclers**

Informal waste pickers and recyclers play a crucial role in the context of plastic waste management in Yaounde. These individuals often operate within the informal sector, collecting, sorting, and recycling plastic waste from various sources, including households, businesses, and public spaces. Their work contributes significantly to reducing plastic waste accumulation and environmental pollution. Informal waste pickers and recyclers are instrumental in diverting plastic waste from landfills and transforming it into valuable secondary raw materials.

Despite their essential contribution to plastic waste management, informal waste pickers and recyclers often face challenging working conditions, limited access to proper protective equipment, and inadequate recognition for their role in the waste management ecosystem. Additionally, the lack of formal integration into municipal waste management systems poses obstacles to their livelihoods and effectiveness in mitigating plastic waste. Recognizing the vital role of informal waste pickers and recyclers and integrating them into formal waste management structures is essential for enhancing plastic waste management practices in Yaounde.

### **6.3.1 Role and Social Networks of Informal Waste Pickers**

These individuals form a network of workers involved in collecting, sorting, and recycling plastic waste from various sources. Their social networks often extend throughout the city, allowing them to efficiently gather plastic waste from households, businesses, and public spaces. These networks enable them to share information about potential waste sources, collaborate with other waste pickers to cover larger areas, and establish relationships with residents and businesses who inform them about available waste materials.

Additionally, these social connections facilitate the flow of plastic waste to recycling centers, contributing to the diversion of plastic from landfills and its transformation into valuable secondary raw materials. However, informal waste pickers and recyclers often face challenges such as inadequate recognition for their work, health and safety risks due to working conditions, and fluctuating market prices for recycled materials. Formalizing their role and integrating them into formal waste management structures would improve their working conditions and livelihoods and enhance plastic waste management practices in Yaounde. Interviewer: "Could you describe your role as an informal waste picker and recycler in Yaounde's single-use plastic management system?"

### **6.3.2 Skills of Informal plastic waste pickers**

Informal waste pickers in Yaounde demonstrate remarkable knowledge, skills, and resourcefulness in dealing with plastic waste. Their expertise lies in the identification and collection of various types of plastic materials and the sorting and segregation of these materials based on their properties. They understand the market value of different types of plastic, allowing them to make informed decisions about which materials to prioritize for collection and recycling.

In addition to their knowledge, waste pickers exhibit practical skills in handling and processing plastic waste. They are adept at sorting through mixed waste to extract plastic materials, often using rudimentary tools and equipment to facilitate this process. Their resourcefulness is evident in their ability to repurpose and reuse certain plastic items, maximizing the value of the materials they collect.

Furthermore, waste pickers demonstrate resilience and adaptability in their work. They navigate challenging working conditions and health hazards with a degree of resourcefulness, often improvising solutions to overcome obstacles. Their ability to operate within informal networks and collaborate with other waste pickers showcases their social and organizational skills, enabling them to cover larger areas and access a wider range of waste sources.

### **6.3.3 Challenges of Informal Waste Pickers**

Fieldwork revealed that in numerous homes where most single-use plastic waste is produced, there is a deficiency in the desire to properly separate this waste. Even though stakeholders in waste management stress the importance of waste segregation, residents frequently do not understand the necessity of putting in more effort to sort waste and instead throw away all types of waste without discrimination, regardless of whether it is biodegradable or not. To encourage waste separation, CIPRÉ, a waste management group, handed out celery plants grown using compost made from household waste. In addition, every household received two distinct plastic bags in different colours—specifically a blue one for non-biodegradable trash and a black one for biodegradable trash. Although this project was successful at first, its success was only evident during the time when households were kept receiving these gifts of celery plants and the plastic bags for dumping.

An interview with Etienne, a waste picker for the CIPRÉ waste management association in Simbock neighbourhood responded to the challenges and stigmatization he goes through as follows:

*Interviewer: As a waste picker, what do you think about improving waste management and how are you as a waste picker perceived by the population?*

*Etienne: "As a waste picker and a university student, I have a unique perspective on waste management. Waste management should involve all actors, including the government, private sector, and the community. Each has a role in ensuring that waste is properly managed and recycled. However, despite being a dedicated student, I often face stigmatization due to my occupation. This stigma overlooks waste pickers' important role in keeping our environment*

*clean and contributing to recycling efforts. I hope that in the future, waste pickers like myself will be recognized for our valuable contribution to waste management and given the respect we deserve."*



**Photo 49:** Etienne collecting waste from door-to-door with his truck  
**Source:** Mbanam Valentine, 16<sup>th</sup> April 2020

Etienne's desire to preach by example is evident in his meticulous waste segregation practices, which serve as a model for encouraging households to adopt similar behaviours. After collecting waste door-to-door, he meticulously sorts through the materials, retaining any valuable objects for personal use or selling them to interested parties. Notably, plastic bottles previously used to package water or beverages are highly sought after, with cleaner ones being more desirable than those soiled with cooking oil. This approach not only exemplifies Etienne's commitment to waste management but also serves as a practical demonstration of the benefits of conscientious waste segregation.



**Photo 50:** Waste Segregation: Plastic Bottles Gathered in Large Net  
**Source:** Mbanam Valentine, 6<sup>th</sup> April 2020

#### **6.3.4 Waste Pickers and Plastic Waste**



Their establishment of waste segregation exemplifies the resourceful and ingenious attitude of waste pickers points adjacent to fixed dumping grounds. Amidst these locations, commercial activities thrive, with waste pickers meticulously sorting all plastic objects, weighing them, and selling the segregated materials. This astute approach not only demonstrates their adaptability within challenging environments but also underscores their pivotal role in the recycling ecosystem.



**Photo 51:** Informal Waste Segregation and Commercial Activity at Dumping Ground.  
**Source:** Mbanam Valentine, 18<sup>th</sup> March 2019

The resourcefulness and adaptability of waste pickers are evident in their ability to see value in discarded plastic turning it into a valuable commodity. This perspective has led to the creation of informal offices that serve as centers for commercial activities. These activities provide employment opportunities for other waste pickers and elevate the status of those involved in society. This reevaluation of waste plastic as a valuable asset highlights these individuals' resilience and entrepreneurial spirit within the waste management system.

#### **6.4 Municipal Waste Management and Single-Use Plastics**

Municipal waste management in Yaounde faces significant challenges in addressing the proliferation of single-use plastics. For instance, despite efforts to implement plastic waste collection and recycling programs, the city grapples with inadequate infrastructure and limited resources, leading to suboptimal plastic waste diversion and recycling rates. Additionally, informal waste pickers and recyclers are crucial in managing single-use plastics, often outside formal waste management systems. This dynamic presents a complex scenario where municipal

efforts to manage single-use plastics intersect with the activities of informal actors, shaping the overall landscape of plastic waste management in Yaounde.

#### **6.4.1 Public Financing of Waste Management**

Municipal waste management in Yaounde faces significant challenges in addressing the proliferation of single-use plastics. For instance, despite efforts to implement plastic waste collection and recycling programs, the city grapples with inadequate infrastructure and limited resources, leading to suboptimal plastic waste diversion and recycling rates. Additionally, informal waste pickers and recyclers are crucial in managing single-use plastics, often outside formal waste management systems. This dynamic presents a complex scenario where municipal efforts to manage single-use plastics intersect with the activities of informal actors, shaping the overall landscape of plastic waste management in Yaounde.

The Government of Cameroon is the main guarantor and financier of Urban waste services. The Government collects taxes from waste management services from the salaries of the public and private sector workers through council taxes from small-scale enterprises. The table below shows the amount collected from the salaries according to the Finance law applies to commercial, industrial, artisanal and agro-pastoral activities that do not fall under the real profit regime, the simplified tax regime or the basic regime, and whose turnover is less than 15,000,000 CFA francs.<sup>83</sup> Any natural or legal person who habitually carries out a profit-making activity in a municipality is subject to the patent tax. Habitual and lucrative activity means any repetitive exercise of commercial acts in order to make it a profession for the purpose of making a profit.

In other words, the patent tax is a tax on businesses that operate in a municipality and that make a profit. The tax is based on the turnover of the business, and businesses with a turnover of less than 15,000,000 CFA francs are exempt from the tax.

The patent tax is a local tax, and the revenue from the tax is collected by the municipality in which the business is located. The tax is used to finance local services, such as infrastructure, education, and healthcare. Here are some additional details about the patent tax in Cameroon:

- The tax is due on January 1 of each year.
- The tax is payable in two installments, on January 1 and July 1.
- Businesses that fail to pay the tax on time are subject to a penalty.

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<sup>83</sup> Article 45 of the joint circular n°0002335/MINATD/MINFI of October 20, 2010.

- Businesses that are exempt from the patent tax must still file a tax return.

Monthly base salary	Annual taxes for Civil Servants	Capital (XAF)	Annual taxes of establishments paying direct tax (XAF)
62 000 to 75 000	3 000	Less than 30 000	7 500
75 001 to 100 000	6 000	30 001 to 60 000	9 000
100 001 to 125 000	9 000	60 001 to 100 000	15 000
125 001 to 150 000	12 000	100 001 to 150 000	22 500
150 001 to 200 000	15 000	150 001 to 200 000	30 000
200 001 to 250 000	18 000	200 001 to 300 000	45 000
250 001 to 300 000	24 000	300 001 to 400 000	60 000
300 001 to 500 000	27 000	400 001 to 500 000	75 000
> 500 000	30 000	> 500 000	90 000

**Table 7:** Table of tax collection as stipulated by the finance law  
**Source:** law 2009/019 of 05 December 2009 on local tax

According to the Finance Law, the Ministry of Finance should transfer part to Local Regional Authorities (LRA) after collecting these taxes. However, unfortunately, the reality on the ground tells a different story even though taxes are collected monthly. This situation leaves much to be desired because the resources allocated for waste management in Yaounde are limited. The Local Councils and the Yaounde City Council contribute about 20 per cent to the total sum reserved for the city's waste management. The government pays the remaining 80 per cent (Ntoumba, 2010).

FEICOM is a Governmental institution created to enhance local development throughout the country. The initiative of the State was to put in place a structure that should function as a Bank, proposing the services of a bank to LRA. Its resources are obtained from contributions from Councils. Local Councils collect taxes from their various areas of jurisdiction; they concede part of these taxes collected to FEICOM. This institution, in return, also play a reciprocal role towards the Councils by bolstering some development projects in waste management or, better still, public hygiene and sanitation. Many development projects have obtained finances from FEICOM in every country, including the Councils in Yaounde. There is no recorded assistance or financing for the waste management sector.

Besides financial assistance and other contributions from the Government and local institutions, SWM is also assisted by foreign donors. The PADY project by the Government has benefitted from financial support from several foreign donors. One of the recent cases is the financial assistance obtained from the African Development Bank (ADB). This finance was approved in 2006 and ended in November 2012, sustained by the ADB. Turning to foreign aid is usually the last resort, especially when the Government is out of resources. Generally, such finances are very punctual. This first assistance became known as PADY 1; in 2019, PADY2 was launched.

In pursuance of PADY1, PADY2 steps aside as the second phase with financial assistance from the same foreign donor. The Yaounde Sanitation project has reduced the number of floods in the Cameroonian capital five times, from 15 to 3. This first phase was launched in 2007. The second phase has helped develop 20% of the central river canal (Mfoundi) and its four tributaries crossing the city of Yaounde. It will further help develop the remaining canal, thus strengthening the first phase's positive impacts on health and urban poverty reduction. Its total cost was estimated at US Dollars 102 448 000, It will be jointly financed by the ADB, the GEF, and the Cameroonian Government, and the project is scheduled to end after 48 months. *Photo 53* below shows the construction of a large canal to curb urban flood.



**Photo 52 :** Constructed work built to reduce flooding in the Central Town  
**Source:** Mbanam Valentine, 14<sup>th</sup> September 2020

#### **6.4.2 The Government and the City Council Strategies for Plastic Waste Management**

The municipal waste management policy of Yaounde relies on a public-private partnership to ensure regular waste collection and disposal. However, challenges such as the

lack of legislation, inefficient collection, and poor recovery and disposal persist. The policy also involves outsourcing waste management to private companies, which has led to declining waste collection rates and rising costs, raising sustainability concerns.

As mentioned in the previous paragraphs, the waste management sector is governed by a regulatory framework. In this legal framework, public waste management is solely under the direct responsibility of the City Council and the Sub-Divisional Councils in their various areas of competence. An inter-ministerial Commission was held, and only the City Councils conceded the financial rights and all decisions concerning waste management. This act immediately ended all the activities previously carried out by Subdivisional Councils. The authority conferred on the City Councils goes as far as making any decision without consulting the Subdivisions.

Today City Mayors are responsible for the same functions hitherto held by the Government Delegates who benefitted from Presidential appointments. With the last Municipal elections in February 2020, the law on decentralization was enforced, stipulating that, in the Decentralization process, a change in the appellation and the structure of the decentralized organs will now be. In this light, following this law, City Councilors have been elected by their peer councillors.

For the last few years, Yaounde has been overwhelmed by excessive waste almost everywhere. The Yaounde City dwellers kept wondering the reason that could account for such a mess on their streets. From empirical evidence, all fingers are pointed at HYSACAM, the leading enterprise in charge of SWM or Municipal waste. The situation has not changed much because the problems plaguing the enterprises have not been resolved. Their technical waste management shows that they usually face difficulties managing their finances. Some sources on the field blame this poor management on the monopoly the Government has conceded on HYSACAM.

The management of this enterprise complained about not receiving their regular payment from the Government. With this very uncomfortable situation, they could not handle some of their most pressing charges related to the payment of their workers, taxes, the maintenance of their equipment, and the purchase of new equipment. The enterprise seemed to recover from this uncomfortable situation when it witnessed an increase in its budget from 1.5 Billion XAF in the 90s to 6 Billion XAF by 2016. Moreover, civil societies have gained much experience in this domain and could represent a reliable help for the Government to bolster their efforts in this herculean task in Yaounde.

### **6.4.2.1 HYSACAM**

HYSACAM is Yaounde's main municipal waste management company, operating in Douala and Yaounde and handling waste management services in 17 cities throughout Cameroon (Proparco, 2012; Proparco, 2017). The company collects over 1.5 million tonnes of waste a year or 4,000 tonnes a day and operates across the waste management chain, from collection to processing (Proparco, 2012). HYSACAM employs 4,000 people, and 15 million Cameroonians currently benefit from its services (Proparco, 2012; Proparco, 2017). The company has been recognized for its effectiveness, with its ability to adapt to changing requirements, recruit trained personnel, and deploy modern equipment cited as reasons for its success (Proparco, 2012).

HYSACAM's services are crucial for environmental protection and public health, and its operations are essential for providing jobs and maintaining the cleanliness of urban settlements (Proparco, 2012; UCLG, 2020). Recently, the Yaounde City Hall reorganized urban waste collection, and the company no longer has a monopoly on collecting and transporting household waste in Yaounde (Afrik 21, 2023). The service of collection and transport of household waste in the third district of Yaounde, which includes the city's administrative centre, will be assigned to a new operator, THYCHLOF Sarl. However, HYSACAM will continue to collect, transport, and treat household waste in the other six Councils of the city (Afrik 21, 2023).

In summary, HYSACAM is Yaounde's main municipal waste management company, operating in Douala and Yaounde and handling waste management services in 17 cities throughout Cameroon. The company collects over 1.5 million tonnes of waste a year or 4,000 tonnes a day and operates across the waste management chain, from collection to processing (Afrik 21, 2023). HYSACAM's services are crucial for environmental protection and public health, and its operations are essential for providing jobs and maintaining the cleanliness of urban settlements.

#### **6.4.2.1.1 Waste Collection and Transportation**

Yaounde's main waste management company, HYSACAM, provides services that deeply influence the city's cultural, social, and environmental dynamics. Firstly, its waste collection services impact the daily lives of the city's residents, influencing their interactions with the urban environment and the management of waste materials. This interaction is shaped by cultural practices, social hierarchies, and environmental attitudes, all of which affect how waste is generated, disposed of, and perceived within the community.

Additionally, HYSACAM's waste management services intersect with social and cultural dynamics through their impact on local employment, community health, and public spaces. The company's operations create employment opportunities for residents, influencing the social and economic fabric of the city. Moreover, the cleanliness and sanitation of public spaces, which HYSACAM manages, contribute to the overall well-being and quality of life of the population, reflecting cultural values related to cleanliness and environmental stewardship.

From an environmental perspective, HYSACAM's waste management services play a crucial role in mitigating the environmental impact of waste disposal. The company's practices and policies influence the city's environmental sustainability, waste recycling efforts, and overall ecological health. This intersection with environmental dynamics is essential for promoting sustainable waste management practices and addressing environmental concerns within the urban context.

In summary, the services provided by HYSACAM intersect with cultural, social, and environmental dynamics by influencing community practices, social structures, economic opportunities, public health, and environmental sustainability within Yaounde. Understanding these points of convergence is essential for crafting impactful, culturally attuned, and enduring waste management approaches that resonate with the local community's values and enhance the city's welfare.

#### **6.4.2.1.1.1 Door-to-door Waste Collection**

The door-to-door collection process embodies cultural norms and social structures, as it directly interacts with households and communities, influencing the patterns of waste disposal and the maintenance of cleanliness within specific neighbourhoods. This engagement reflects the cultural values and social hierarchies present in the community, ultimately shaping the way waste is managed and the overall cleanliness of the area.

Additionally, this service impacts the social and economic fabric of the city by creating employment opportunities for local waste collectors and contributing to the overall well-being and quality of life of the population. Furthermore, from an environmental perspective, the door-to-door waste collection services play a crucial role in mitigating the environmental impact of waste disposal, contributing to the city's environmental sustainability and waste management efforts. Understanding the cultural, social, and environmental dimensions of HYSACAM's door-to-door services is essential for developing inclusive, effective, and sustainable waste management strategies that resonate with the local population and align with their cultural values and practices.





**Photo 53:** Door to door waste collection in the Nsimeyong neighbourhood  
**Source:** Mbanam Valentine, 9<sup>th</sup> July 2020

According to interviews conducted with residents of certain neighbourhoods, HYSACAM, the main waste management company in Yaounde, holds significant meaning for them. One resident from the Nsimeyong neighbourhood shared her experience with the company. "The door-to-door waste collection service provided by HYSACAM has benefited our community in many ways. It has made waste disposal more convenient and has contributed to a cleaner environment in our neighbourhood. However, there have been some shortcomings. The collection schedule is sometimes irregular, leading to overflowing bins and unpleasant odours. Additionally, when HYSACAM's services are suspended, we face significant challenges in managing our waste. This can result in unsightly waste accumulation and potential health hazards for our community. We hope HYSACAM can address these issues to ensure consistent and reliable waste management services for our neighbourhood.

#### 6.4.2.1.1.2 Fixed Point Collection



**Photo 54:** Waste disposal site in the Ngousso neighbourhood  
**Source:** Mbanam Valentine, 14<sup>th</sup> March 2019



Residents from other neighbourhoods have expressed the importance of HYSACAM. A resident from the Ngousso in the Yaounde IV Council area recounted her experience with the company. "The presence of designated collection points has helped maintain cleanliness and orderliness in our neighbourhood. However, there has been irregular waste collection, leading to overflowing bins and unsightly surroundings. Moreover, when HYSACAM's services are suspended, we encounter difficulties in managing our waste"

#### **6.4.2.1.2 Waste Disposal**

HYSACAM, the waste management company in Yaounde, employs a comprehensive waste disposal process after collecting waste from fixed points and providing door-to-door services. Once the waste is gathered, it is transported to the landfill site in Nkolfoulou (Eloundou, 2006). Upon arrival at the landfill, the waste trucks are subjected to a weighing process to quantify the waste load before discharging the unsorted waste. Subsequently, another truck is responsible for burying the waste. Notably, the landfill site features strategically placed pipes that capture the emitted greenhouse gases, which are then subjected to a gas purification process by the KYOTO Protocol. This highlights the complex interactions between humans and the environment, as well as the technological measures used to reduce the environmental impact of waste disposal practices.

##### **6.4.2.1.2.1 Landfill Management**



**Photo 55:** An Ampliroll 9m truck offloading waste at the landfill  
**Source:** Mbanam Valentine, 11<sup>th</sup> June 2020

##### **6.4.2.1.2.2 Plastic Waste Management**

HYSACAM, the primary waste management company in Yaounde, previously had a system to separate non-biodegradable and biodegradable waste. This involved compacting waste plastic bottles and selling them to recycling companies. However, the current practice involves burying household waste without sorting into landfills. The landfill operation does not

encompass a sorting procedure, thereby lacking waste segregation into distinct categories of biodegradable and non-biodegradable materials. Consequently, waste is indiscriminately buried without differentiation, precluding the separate treatment of plastic waste within the disposal process.

This statement highlights a significant deficiency in the landfill operation, as it elucidates the absence of a systematic sorting procedure for waste management. The failure to segregate waste into distinct categories of biodegradable and non-biodegradable materials reflects a missed opportunity for more environmentally conscious disposal practices. Consequently, the indiscriminate burial of waste without differentiation not only hinders the potential for recycling and composting of biodegradable materials but also precludes the separate treatment of plastic waste, which is a critical environmental concern due to its non-biodegradable nature and potential for long-term ecological impact. This operational approach underscores a lack of comprehensive waste management strategies and raises environmental sustainability issues in waste disposal.



**Photo 56:** ...Compacted Plastic Bottles by HYSACAM Ready for Recycling  
**Source :** [www.investincameroon.com](http://www.investincameroon.com)

## 6.5 Legal Stakeholders in Waste Management

The legislative framework in Cameroon allows for the establishment of Associations and Non-Governmental Organizations (NGOs) with both national and international implications. The country's Constitution, which embodies fundamental laws, grants the freedom of association in its preamble. Furthermore, the enactment of specific laws authorizes the formation of NGOs. These associations attain legal status upon declaration or authorization/accreditation, depending on their scope of operation. According to Section 2 of the 1999 law, an NGO is defined as a declared association or an authorized foreign association,

accredited by administrative authorities to pursue missions of general interest as stipulated by the prevailing law.

Formal waste management institutions in Yaounde typically include government agencies, municipal authorities, legalised environmental associations, NGOs, and waste management companies. These institutions oversee and implement waste management policies, regulations, and programs within the city. Government agencies and municipal authorities often establish legal frameworks and regulations about waste management, including waste collection, transportation, disposal, and recycling guidelines. These legal texts mainly the Law No.96/12 of the 5th of August 1996 on the management of the environment may outline specific requirements for waste management practices, environmental standards, and penalties for non-compliance.

Some waste management companies operate under contracts or agreements with municipal authorities to provide waste collection, transportation, and disposal services. These companies are expected to adhere to legal and regulatory requirements while managing waste within the city. A good example is the contract signed between the Yaounde IV, V Councils, and Hyper Clean Sarl worth 400 million XAF. To express his engagement in keeping the Council clean, the General Manager stated;

*"We announced strong measures a few weeks ago, including fines of 10,000 XAF for anyone littering in the Yaounde V Council. These Hyper Clean agents are responsible for strictly enforcing this measure."*

### **6.5.1 Policies and Initiatives Implemented by Formal Institutions**

The policies and initiatives implemented by formal institutions in Yaounde reflect the intersection of cultural, social, and environmental dynamics within the city. These measures are regulatory frameworks and embodiments of societal values, power structures, and environmental consciousness. Policies and initiatives related to waste management are influenced by cultural attitudes towards the environment, community practices, and historical contexts.

Policies and initiatives in Yaounde intersect with local traditions, belief systems, and social organization significantly from an anthropological perspective. For instance, promoting recycling initiatives may align with traditional practices of resourcefulness and reuse within local communities. Additionally, waste management policies may need to consider cultural norms and beliefs regarding waste disposal and cleanliness. In some communities, there

traditional practices related to waste management, such as communal clean-up events or taboos against littering, which can influence the effectiveness of formal waste management initiatives.

Furthermore, social organizations within neighbourhoods and communities have impacted the implementation of waste management policies, as community leaders and social structures have shaped local attitudes and behaviours towards waste management. In a nutshell, the intersection of formal waste management policies and local traditions, belief systems, and social organization in Yaounde emphasizes the importance of understanding and incorporating cultural and social factors into sustainable waste management strategies.

#### **6.5.1.1 Namé Recycling**

Namé Recycling is the leading operator in this sector. Its operations are visible in the country's two great metropolitan cities: Yaounde and Douala. Their mission is “ to promote a circular economy by giving a second life to plastic waste and reducing plastic pollution while bringing economic opportunities to the communities we serve.” The company's primary operations are delineated into distinct functions: the collection, processing, and conversion of waste plastic bottles.

This recycling enterprise, established in Limbe within the South West Region in 2015 and commencing operations in Yaounde in April 2017, exhibits a well-organized structure. Its overarching aim in Yaounde is to convert 50% to 75% and 90% of plastic waste into valuable resources. This ambitious objective relies on a diverse and extensive client base. The clients are categorized into two groups: those engaged in collecting and selling these plastic wastes to the recycling company, and those involved in procuring the company's refined products, which function as raw materials for other plastic manufacturing entities. The division of labour in this company is organized according to the collection, processing and conversion.

##### **6.5.1.1.1 Plastic Waste Collection**

The Namé Recycling team collects PET, HDPE, and LDPE plastics through their network of informal waste pickers. This function serves as the primary responsibility of the plastics waste collection department, catering to clients from both the formal and informal sectors, although the latter predominantly dominates this activity. Individuals often reach out to the team when faced with accumulating plastic bottles in various areas such as drainage systems, open gutters, rivers, and trenches, or when seeking assistance from informal waste scavengers. This endeavour proves to be lucrative for participants within this sector. The waste plastic bottles are categorized as follows;

Plastic Bottle type	Price
Grade A (New plastic bottles)	75 XAF / Kg
Grade B (Fairly used plastics bottles)	65 XAF /Kg
Grade C (Old plastics bottles)	55 XAF /Kg

**Table 8:** Single use Plastics waste classification in terms of value

**Source:** Mbanam Valentine: 22<sup>nd</sup> March 2019



**Photo 57:** J2D Afrique team of Volunteers collecting plastic waste bottles in a stream in Biyem-Assi

**Source:** Mbanam Valentine, 11<sup>th</sup> September 2020

Upon collecting these plastics, they undergo a sorting process based on their respective types and colours, and are subsequently grouped accordingly. Plastic bottles that are soiled or contaminated with substances such as oil undergo a cleansing procedure involving detergent and clean water, as depicted in the accompanying image.



**Photo 58:** Name Recycling Van used in the transportation of Plastic waste bottles

**Source:** Namé Facebook Publication

#### 6.5.1.1.2 Manual Plastic Sorting



The sorting of plastic waste represents a pivotal phase in the recycling process, given the immiscibility of plastics, rendering them incompatible for amalgamation during recycling. Consequently, prior to the washing stage, the plastics must undergo sorting. While more advanced sorting methods exist, particularly in developed nations, manual sorting utilizing visual recognition remains the most effective approach, offering a commendable level of separation at a reasonable cost.

The manual sorting process involves a team of workers categorizing the bottles into distinct groups. These bottles are sourced from drainage systems, streams, and designated waste collection points, particularly those in the Namé Bins. These bin structures, resembling bottles, are strategically positioned alongside roads and near waste disposal areas. This initiative seeks to promote waste segregation among residents of Yaounde, encouraging them to differentiate between plastic bottles and other forms of waste. The presence of these bins along the roadsides is gradually fostering awareness among the city's inhabitants, emphasizing the importance of not discarding plastic bottles, but rather collecting and directing them towards recycling facilities.



**Photo 59:** A Namé Bin on the campus of The University of Yaounde 1  
**Source:** Mbanam Valentine, 21<sup>st</sup> June 2020

The sorting criteria encompass the plastic type, colour, and condition, distinguishing between cleanliness and dirtiness. Subsequently, the bottles are organized into distinct categories, each to be treated differently based on the prior contents of the plastic waste. It is essential to emphasize that the plastic types in question are PET, PEHT, PEBD, PP, and PS.

#### **6.5.1.1.3 Plastic Bottle Washing**



**Photo 60:** Bottle Cleaners washing waste plastic bottles  
**Source:** Mbanam Valentine, 22<sup>nd</sup> March 2019

#### **6.5.1.1.4 Machine-Assisted Plastic Bottle Grinding**

After washing, these plastic bottles are transformed into flakes and PET straps through extrusion and pelletization. Additionally, other components are prepared for granulation. Granulation involves the production of granular synthetic resin by creating an emulsion of molten synthetic thermoplastic resin at a temperature above its melting point, mixed with a liquid dispersant through agitation. This emulsion is then cooled through indirect countercurrent heat exchange while being agitated, resulting in the solidification of the resin into particles of predetermined size while retaining the dispersant in liquid form, ultimately producing a resin-in-dispersant.

Typically, thermoplastic resin materials are delivered to manufacturers as finished consumer products. These materials are the raw components for producing various other finished products, often powder or granules. Namé Recycling, for instance, can appropriately melt or soften these materials and shape them through processes such as molding and extrusion. By supplying these thermoplastics in these forms, Namé Recycling synthesizes the resin or works as the compounder, blending the resin with plasticizers, pigments, and other necessary agents for the final fabrication. It is important to note that, even after undergoing these processes, the client or customer manufacturer must carry out additional operations on the molten resin to convert it into granular form.

The granular purchasers must convert these resins into specified forms or shapes. Then, after hardening, the shaped objects are cut into smaller particles of suitable sizes to a certain extent. The cutting or shredding of these thermoplastics resins materials is sticky, making it

difficult to achieve consistent results. After this phase, these clean bottles are carried to the compactor machine.



**Photo 61:** The plastic recovery manual of a vertical axis shredder (Jon Vogler) in Namé Recycling.

**Source:** Mbanam Valentine, 22<sup>nd</sup> March 2019

Plastic pellets begin with the washed plastic bottles, which are then shredded into small pieces using a shredding machine. These shredded pieces are then fed into a granulator, where they are further reduced in size and transformed into small granules. The granules are then fed into an extruder, melting and forcing through a die to form long strands of plastic. These strands are then cut into small pellets using a pelletizing machine, resulting in the final plastic pellets. The help of the assistant is essential due to the machine's size and length. Its 35 meters long with an output of 200~2500 kg/h, motor power: 22~60 kw, number of blades: 28~74 PCS, and Blade material SKD-11



**Photo 62:** Plastics packaged in front of a vertical axis shredder (Jon Vogler) ready for shredding after sorting and washing in Namé Recycling.



**Source:** Mbanam Valentine, 22<sup>nd</sup> March 2019

#### **6.5.1.1.5 The Recycled Finished Products**

The treatment of these waste plastics produces different types of end products, namely, plastics flakes and PET straps, from granules and pellets used by factories as primary products or raw materials in producing plastics materials. Manufacturers highly value these two products for their quality and their prices. Hitherto, manufacturers were obliged to import these products from near or far, and the cost was enormous compared to the locally produced plastic flakes and PET straps of about the same quality. These plastics flakes and PET straps are sold in the local and the international market as recycled raw materials.



**Photo 63:** Chopped plastic particles to be transformed into granular  
**Source:** Mbanam Valentine, 22<sup>nd</sup> March 2019



**Photo 64:** A pellet representing a finished product ready for exportation  
**Source:** Mbanam Valentine, 22<sup>nd</sup> March 2019

### **6.5.1.2 J2D-Afrique**

J2D-Afrique, a local NGO established in 2014 with registration number No. 0000735/RDA/J06/BAPP Mfoundi on December 4, 2014, operates as a legalized waste management association in Biyem-Assi. The organization is dedicated to fostering income-generating activities through the collection and recycling of waste, particularly plastic waste, in alignment with the Ministry of Environment, Protection of Nature, and Sustainable Development (MINEPDED) report indicating the production of over six hundred thousand tons of plastic waste in Cameroon.

J2D-Afrique, which stands for "Jeunesse et Développement Durable pour l'Afrique," operates as a non-political and non-profit association, established by the law N°90/053 of 19 December 1990 on freedom of associations in Cameroon. While headquartered in Biyem-Assi, Yaounde VI Subdivision, the association extends its activities across the national territory and beyond, envisioning a prosperous Africa focusing on youth development. The organization's objectives are clearly defined, focusing on sustaining living conditions in rural and urban areas, creating local wealth, and contributing to poverty reduction among vulnerable groups. These objectives are further detailed to include the promotion of youth involvement in sustainable development actions, the encouragement of entrepreneurship and innovation, the facilitation of youth participation in developmental networks, the enhancement of sustainable living conditions, the promotion of food security through agricultural projects, and the advocacy for the use of ICT for development.

#### **6.5.1.2.1 Plastic Waste Collection Activities**

During my ethnographic fieldwork with J2D-Afrique in the Yaounde VI Council, we ventured into a stream inundated with plastic bottles originating from various neighbourhoods and discarded into the waterway. Witnessing this environmental issue firsthand, we collected the plastic bottles and utilized large nets to gather and contain them. Subsequently, these collected plastics were sold to Name Recycling, a local recycling company. This experience provided valuable insight into the local dynamics of plastic waste management and the collaborative efforts between J2D-Afrique and recycling entities in addressing environmental challenges.



**Photo 65:** Plastic Waste Accumulation in a stream, with J2D-Afrique Team collecting plastic waste bottles in Biyem-Assi

**Source:** Mbanam Valentine, 11<sup>th</sup> September 2020



**Photo 66:** ... Researcher and J2D-Afrique Team Collecting Plastic Bottles from stream using a large net

**Source:** Mbanam Valentine, 11<sup>th</sup> September 2020

#### **6.5.1.2.2 Promoting Urban Agriculture with Plastic Waste**

J2D-Afrique's promotion of urban agriculture using waste plastic bottles in Biyem-Assi reflects a multifaceted approach to sustainable development within the local community. By organizing numerous campaigns and training programs, the organization engages with the cultural and social dynamics of the area, fostering a deeper understanding of the relationship between urban residents and their environment. Through these initiatives, J2D-Afrique not only encourages practical skills in agriculture but also promotes reimagining waste materials as valuable resources, challenging traditional perceptions of urban spaces and plastic waste.

Growing crops such as pepper and celery in recycled plastic bottles is a practical way to show how sustainable food production can be achieved in cities. This practice combines cultural traditions with environmental awareness and community involvement. Looking at it from an anthropological viewpoint, it highlights the importance of these projects in changing how people in Biyem-Assi think about waste, food, and the urban environment. This, in turn, helps to promote a more complete approach to sustainable living.



**Photo 67:** Innovative Urban Agriculture: Resourceful Celery Cultivation in Plastic Bottle Containers

**Source:** Mbanam Valentine, 2<sup>nd</sup> September 2020

The photo above depicts a farmer engaging in urban agriculture, utilizing a creative and resourceful method for cultivating celery. The farmer is shown holding two halves of a plastic bottle, with the upper part containing soil and the lower half containing water. These two sections are linked by a woolen thread, facilitating water conveyance from the lower half to the top through capillarity. This innovative approach demonstrates the farmer's ingenuity in maximizing limited resources for agricultural production in an urban environment.

It also emphasizes the potential for urban agriculture to contribute to food security and resilience, particularly in small-scale farming settings. The discussion highlights the environmental performance of smallholder mixed farms, underscoring their relatively low dependence on purchased inputs and their capacity to withstand certain economic shocks. This holistic approach to urban agriculture not only addresses food production but also underscores the importance of sustainable practices and resource efficiency in urban settings.



**Photo 68:** Plastic bottles used in a stacked vertical farm in Biyem-Assi  
**Source:** J2D Afrique, 15<sup>th</sup> September 2018

The above photo captures a striking example of vertical farming, where plastic bottles are aligned on a vertical wall, each containing thriving plants such as lettuce, parsley, celery, and pepper. The innovative use of limited space to cultivate a diverse range of vegetables is evident, showcasing the farmer's resourcefulness and ingenuity in urban agricultural practices. The stacked arrangement of the plastic bottles demonstrates an efficient and space-saving method of producing various vegetables in a constrained urban environment. The farmer standing by the stacked farm symbolizes the successful implementation of sustainable and inventive agricultural techniques, highlighting the potential for urban farming to address food security and promote self-sufficiency in densely populated areas.

#### **6.5.1.2.3 From Plastic Pollution to Urban Agriculture: Empowering Youth for Environmental Stewardship**

In the context of contemporary environmental challenges, the engagement of an association to train younger generations in environmental stewardship represents a significant anthropological phenomenon. This initiative addresses the pressing issue of plastic pollution and embodies a cultural shift towards sustainable practices and intergenerational knowledge transfer. By empowering youth to collect plastics from the environment and utilize them in urban agriculture, this endeavour fosters a sense of environmental concern and responsibility, intertwining traditional agricultural practices with modern environmental consciousness.



The training of younger generations in collecting and utilising plastics for urban agriculture reflects a multifaceted anthropological narrative. It signifies a departure from conventional waste management approaches and embodies a cultural reevaluation of the role of plastics in the environment. Furthermore, it represents a form of cultural transmission, as the knowledge and practices imparted to the youth are deeply rooted in the community's environmental ethos. This initiative not only addresses environmental issues but also serves as a platform for the preservation and adaptation of traditional agricultural knowledge within the context of contemporary environmental challenges.



**Photo 69:** Training youths on Plastic Bottle Utilization in Urban Agriculture  
**Source:** Mbanam Valentine, 19<sup>th</sup> October 2019

### **6.5.2 Interactions and Challenges Faced with Informal Actors**

Waste management in Yaounde involves a complex interplay of social, economic, and environmental factors. Collaboration between formal waste management institutions and informal actors and communities has the potential to improve waste management practices and promote sustainability. However, the informal nature of Yaounde waste collection and recycling activities poses significant challenges. Informal waste pickers and recyclers often operate outside formal regulatory frameworks, leading to a lack of recognition and support for their contributions. This informal sector is characterized by a lack of legal protections, limited access to resources and infrastructure, and often precarious working conditions. Integrating informal actors into formal waste management systems poses governance, regulation, and resource allocation challenges.

A complex interplay of social, economic, and environmental factors influences the interactions between formal waste management institutions and informal actors in Yaounde. While these collaborations have the potential to enhance waste management practices and

promote sustainability, they also face significant challenges. The informal nature of waste collection and recycling activities in Yaounde, characterized by a lack of legal protections, limited access to resources and infrastructure, and often precarious working conditions, poses challenges related to governance, regulation, and resource allocation.

Additionally, cultural and social dynamics, such as traditional practices, community norms, and social hierarchies, play a significant role in shaping these interactions. For instance, incorporating traditional practices of reusing and repurposing materials within households reflects the cultural value of resourcefulness and frugality, which can inform sustainable waste management strategies. Furthermore, the influence of community leaders and local belief systems on waste disposal behaviours underscores the significance of social structures in shaping waste management practices. Understanding these cultural and social factors is crucial for developing effective and culturally sensitive waste management policies in Yaounde

The interactions and collaborations between formal waste management institutions and informal actors and communities in Yaounde are influenced by various social, cultural, and economic factors. Despite the challenges, there are opportunities for meaningful partnerships that can contribute to more inclusive and sustainable waste management practices in the city. For example, some formal waste management programs have sought to engage with informal waste pickers and recyclers by providing training, resources, and recognition for their work.

The engagement of waste pickers in waste plastic bottle collection in various neighbourhoods throughout the year in Yaounde reflects the informal sector's significant role in waste management. This activity, undertaken by individuals often referred to as waste pickers or scavengers, is a vital part of the informal waste management system in the city. The term "scavenger" has been debated, with some waste pickers and scholars rejecting it. The informal sector, which includes these waste pickers, plays a crucial role in collecting and recycling materials, contributing to the overall waste management efforts in Yaounde.

These initiatives aim to formalize and professionalize the informal waste sector while acknowledging those informal actors' valuable role in waste management. Understanding the cultural and social factors influencing waste management practices and policies is crucial for developing effective and culturally sensitive policies in Yaounde.

### **6.5.3 Effectiveness of Formal Approaches**

The effectiveness of formal approaches to waste management in Yaounde must be analyzed within the context of power dynamics and local realities. Formal approaches, often

driven by governmental or institutional bodies, are shaped by power structures that influence policy formulation, resource allocation, and decision-making processes. These power dynamics can impact the implementation and outcomes of waste management initiatives, particularly in how they intersect with local contexts and community practices.

This interactional and relational configuration is a structuring factor in the co-construction of waste management strategies, where each actor category captures resources from the other that it does not have. The local management of household waste is regulated, and the intervention of public/center actors (local state) and private/peripheral actors (NGOs, individuals) is marked by exclusions on principle. The circular model of waste management, which involves the local authority and private/peripheral actors, is a key aspect of waste management in Yaounde

In Yaounde, the effectiveness of formal approaches to waste management is influenced by the distribution of power and resources within the city. Anthropological analysis reveals how decision-making processes within formal institutions may reflect existing power imbalances, potentially marginalizing certain communities or informal actors involved in waste management. Additionally, the allocation of resources for waste infrastructure, recycling facilities, and public education campaigns may be influenced by political and economic considerations, impacting the equitable distribution of waste management services across different neighbourhoods and social groups.

## **6.6 Plastic Pathways: Cultural Perspectives and Circular Economy Strategies in Yaounde's Single-Use Plastics Waste Management**

Cultural dynamics and Circular Economy in managing SuPs waste in Yaounde explores the intersection of cultural perspectives and the implementation of circular economy strategies in managing SuP waste in Yaounde. This study aims to unravel the cultural dynamics that influence the production consumption and disposal of single-use plastics while also assessing the potential for integrating circular economy principles into local cultural frameworks. By examining the pathways of SuPs within Yaounde's cultural landscape this research aims to identify sustainable interventions that align with the community's cultural values practices and aspirations.

### **6.6.1 Household Engagement: Implementing Circular Practices at the Grassroots Levels**

This refers to the involvement of households in adopting and implementing circular economy practices within their daily routines and consumption patterns. This concept involves



understanding the cultural, social, and economic factors influencing how households engage with sustainable resource management and waste reduction at the grassroots level.

In the context of waste management, household engagement in circular practices encompasses a range of behaviours and actions, such as recycling, reusing, composting, and reducing the consumption of single-use items. We studied how cultural norms, values, and practices shape these behaviours within different households and communities. This involved examining the role of traditions, beliefs, and social dynamics in influencing waste management practices at the household level.

In Yaounde, the role of traditions, beliefs, and social dynamics in influencing waste management practices at the household level is deeply intertwined with cultural norms and everyday routines. For example, certain traditional beliefs in some communities emphasize the concept of environmental stewardship and the interconnectedness of humans with nature. This can manifest in practices such as reusing containers for storage, repurposing materials for household use, and engaging in communal waste disposal activities that align with these cultural beliefs.

We also explored the impact of education, awareness campaigns, and community initiatives on promoting circular practices within households. Understanding how information is disseminated, received, and integrated into everyday life is crucial for assessing the effectiveness of engagement strategies.

### **6.6.2 Business Initiatives: Circular Economy Strategies in Corporate Waste Management**

The role of AJADDEC, a students' association dedicated to practicing circular economy, is a fascinating case study exploring environmental activism within the university setting. AJADDEC's utilization of social media, particularly their Facebook page, as a platform for disseminating environmental issues and increasing awareness reflects the contemporary trend of leveraging digital tools for advocacy and education.

Their physical engagement with the campus and surrounding student residential areas, where they collect discarded plastic bottles, underscores the embodiment of circular economy principles in their daily activities. This hands-on approach mitigates environmental degradation and fosters a sense of environmental stewardship among the student body.

The collaboration between AJADDEC and other environmental associations, such as Coeur d'Afrique, exemplifies the interconnectedness of environmental initiatives within the local community. By working together to give plastic bottles a second life through

transformation into pavements, these associations demonstrate a holistic approach to addressing plastic waste management.

The subsequent sale of these pavements and the acquisition of contracts to place them in certain neighbourhoods through collaboration with local councils exemplify the practical outcomes of their efforts. This not only contributes to the reduction of plastic waste but also promotes sustainable development by creating tangible products with environmental benefits.

The activities of AJADDEC and its collaborative efforts with other environmental associations provide a rich experience through which to examine the intersection of youth activism, circular economy practices, and community engagement. Their work serves as a compelling example of how grassroots initiatives can effect meaningful change within the context of sustainable development and environmental conservation.



**Photo 70:**... Transforming Waste: Pavements Made from Recycled Plastic by Coeur d'Afrique

**Source:** AJADDEC archives, 11<sup>th</sup> August 2021

### 6.6.3 Informal and Formal Collaboration: Synergies in Circular Resource Conservation Efforts

The case study of the collaboration between the NGO Recycling and waste pickers in Yaounde provides a valuable anthropological context for understanding the complex dynamics of informal and formal collaboration in circular resource conservation efforts. This collaboration is an example of how grassroots initiatives and institutional engagement can work together, highlighting the synergies and complexities inherent in community-driven environmental conservation.

In simpler terms, the collaboration between an NGO called Recycling and waste pickers in Yaounde is a useful example for understanding how informal and formal groups can work together to conserve resources in a circular economy. This collaboration shows how grassroots initiatives and institutional engagement can combine to create positive environmental impacts, while also highlighting the challenges and complexities involved in community-driven conservation efforts.

At its core, the collaboration between Namé Recycling, EcoClean, CIPRÉ, environmental associations and NGOs in Yaounde, and the waste pickers embodies the essence of informal collaboration. The waste pickers, operating at the grassroots level, are deeply embedded within the local communities and possess localized knowledge of the environmental landscape. Their daily interactions with the environment, particularly the regular collection of plastic bottles trapped in streams across the seven councils in Yaounde, reflect a form of bottom-up mobilization driven by a sense of shared responsibility and economic empowerment.

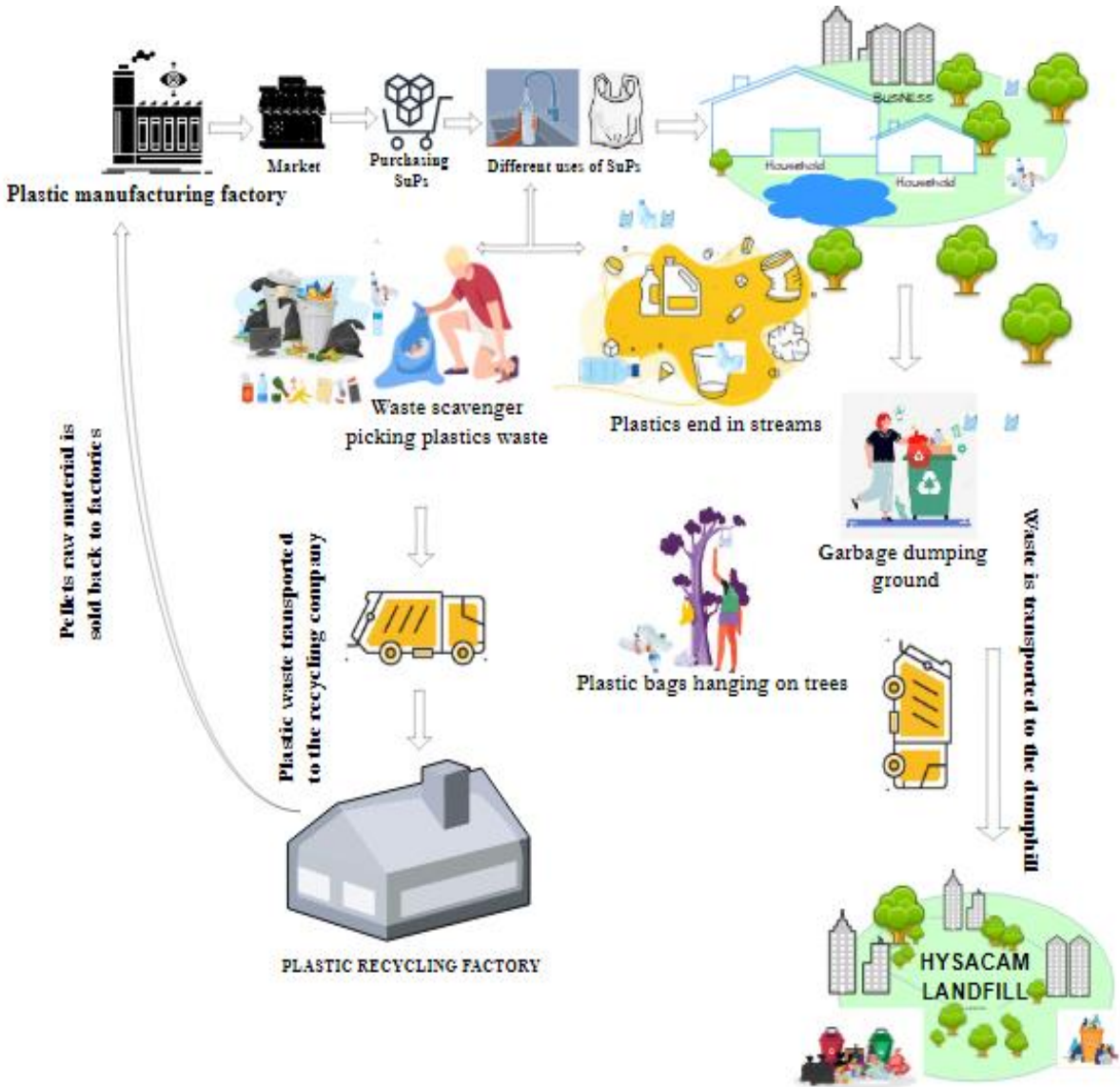
The waste pickers' utilization of large nets to collect plastic bottles from streams underscores their adaptive and resourceful approach to addressing environmental challenges. Their actions contribute to the mitigation of plastic pollution and create economic opportunities for themselves, thereby exemplifying the intersection of environmental conservation and livelihood generation within the local context.

On the other hand, the involvement of Recycling in this collaboration represents a form of formal engagement. As an NGO with a structured mandate and institutional legitimacy, Recycling brings technical expertise, logistical support, and the capacity to scale up waste collection and recycling initiatives. The well-established network between the waste pickers and Recycling associations and firms highlights the interplay between informal and formal collaboration, where localized knowledge and community-driven action intersect with institutional support and systemic influence.

The process of waste pickers identifying plastic bottles in streams, followed by their collaboration with Recycling for collection, weighing, and payment for the plastics, illustrates the seamless integration of informal and formal collaboration in circular resource conservation efforts. This collaborative model addresses environmental concerns and fosters economic empowerment and community resilience, thereby reflecting the multifaceted nature of sustainable development within the local context.

Furthermore, the case study in Yaounde provides a nuanced understanding of how informal and formal collaboration intertwine to create meaningful environmental conservation

impacts. It underscores the importance of recognizing and leveraging the strengths of both modes of collaboration to achieve holistic and sustainable outcomes. It also highlights the cultural, social, and economic dimensions of circular resource conservation efforts within the local community.



**Figure 7:** Single-use Plastics lifecycle.  
 Drawn by Mbanam Valentine with Draw.io

In Yaounde, as shown in figure 4, the plastic life cycle starts with the purchase of plastic items in shops by consumers. Once these products are used, they are either reused or repurposed by individuals or businesses. However, a significant amount of plastic is discarded and ends up in the environment. Waste pickers play a crucial role in collecting these discarded plastics and selling them to recycling firms. HYSACAM, the main waste company in charge of municipal solid waste, also plays a role in managing the plastic waste. While HYSACAM buries a portion of this waste in the landfill, they also work with waste collectors to ensure that recyclable materials are properly sorted and sold for recycling. This collaborative effort helps reduce the amount of plastic waste ending up in landfills and contributes to a more sustainable waste management system in Yaounde.

**CHAPTER SEVEN:  
POLICY COMPLIANCE AND SINGLE-USE PLASTIC USAGE:  
AN ETHNOGRAPHIC ANALYSIS**

This chapter explores the national laws, regulations and policies. By examining how Yaounde city dwellers respond to these laws and local practices, we hope to better understand how plastics are managed. Through ethnographic studies we will explore how communities adapt to and interact with national policies highlighting the challenges of complying with these policies at the local level. By studying single-use plastics' historical and cultural aspects, we aim to provide valuable insights into policy compliance and its impact on various cultural and societal contexts.

### **7.1 National Legislation, Regulations, and Policies on Plastic Bans**

Yaounde's national legislation plays a crucial role in managing single-use plastics, bridging the gap between local and global efforts. It sets local standards for production, use, and disposal, while aligning with global policies for environmental protection and sustainable practices. This comprehensive approach ensures coherence and consistency in tackling the challenges of plastic pollution, both within Yaounde and internationally.

The constitution in Cameroon holds the highest legal authority. It is only subordinate to international treaties and conventions ratified by the country, to which it has a moral obligation to adhere and enforce at the national level. Article 45 specifies that "Treaties and agreements regularly approved or ratified have, from their publication, an authority superior to that of laws, subject to each agreement or treaty, its reciprocal application." We will delve into this legal instrument to emphasize the importance of environmental protection. The excerpt from the preamble of the 2008 constitution, ratified and amended by Cameroon, places significant emphasis on environmental protection, stating that,

*"Every person shall have a right to a healthy environment. The protection of the environment shall be the duty of every citizen. The state shall ensure the protection and improvement of the environment." (Constitution of Cameroon of 2008)*

Although it is subject to the reciprocity of application by other State Parties, this criterion does not apply to human rights conventions, of which environmental law is a part. This falls into the category of inalienable rights when "man has a fundamental right to freedom, equality and satisfactory living conditions, in an environment whose quality allows him to live in dignity and well-being. It has a solemn duty to protect and improve the environment for future generations."

This statement reflects the government's commitment to ensuring a safe environment. The government has also encouraged the involvement of every citizen in this effort by enacting laws that allow the formation of associations, NGOs, cooperatives, and enterprises. Environmental pollution caused by non-biodegradable waste, particularly plastic bags, has been a cause for concern in many countries. The Ministry of Environment, Protection of Nature, and Sustainable Development (MINEPDED) has developed a legal framework to enhance waste management in Cameroon. They have established three distinct laws, as detailed below;

- Law No.96/12 of the 5th of August 1996 on the management of the environment
- Decree N° 2012/2809/PM of 26 September 2012 Fixing the sorting, collection, transport, recovery, recycling, and final treatment of waste;
- Order No. 001/MINEPDED of 15 October 2012 Fixing conditions of obtaining an Environmental Licence as regards the management of waste;
- Joint Order No. 004/MINEPDED/MINCOMMERCE of 24 October 2012 fixed the regulation of the importation and the marketing of biodegradable plastics.

These texts underscored the responsibility for the producer to manage post-consumption of its plastic packaging; it is with statement those generated by the final consumer of their products put on the market. Within this context, the MINEPDED is mandated for all manufacturers of plastic bags or plastics used for packaging. Upon releasing this order, every manufacturer must adhere to the rules and regulations. The conditions to obtain an Environmental Licence to operate legally in the sector require specific commitments and conditions. The first involves presenting a waste management plan for the generated waste and outlining the mechanisms for monitoring its implementation.

The 2018 UNEP report categorizes Cameroon, along with many other countries, as having implemented regulations on plastic bags. The ban was enacted in 2006 but only came

into force 2014 eight years later. It specifies the prohibition of non-biodegradable plastic bags of less than 60 microns. The report also highlighted the ban's impact on the report's writing.

While previous studies highlight challenges like smuggled plastic and lack of affordable alternatives, Cameroon has actively implemented regulations and policies to manage plastic waste effectively. These regulations cover the entire plastic lifecycle, from production to import and recycling, for all entities involved. However, a gap exists in the legal framework regarding the responsibility of end-users in managing post-use plastic waste. This study aims to assess progress made in plastic waste management beyond previous assessments and explore the influence of international commitments on Cameroon's waste management policies.

### **7.1.1 National Strategy to Combat Plastic Pollution**

Cameroon released its National Strategy to Combat Plastic Pollution in January 2024. The strategy outlines Cameroon's specific objectives to address plastic pollution, including reducing plastic waste generation, improving plastic waste collection and management, raising awareness about plastic pollution, and promoting innovation and research. It also highlights the various challenges and opportunities in tackling plastic pollution in Cameroon, drawing on examples from other African countries like Rwanda and Chad.

#### **7.1.1.1 Environmental Management Law**

Law No. 96/12 of August 5, 1996, in Cameroon, is a pivotal legislation that establishes the framework for environmental management in the country. This law, officially known as the "Framework Law on Environmental Management," was enacted to address environmental concerns and regulate activities impacting the environment. It serves as a comprehensive legal instrument guiding environmental protection and sustainable development practices in Cameroon.

The law outlines general principles and provisions aimed at promoting environmental conservation, sustainable resource management, and pollution control. It establishes guidelines for environmental impact assessments, waste management, biodiversity conservation, and the protection of natural resources. Additionally, Law No. 96/12 emphasizes the importance of public participation in environmental decision-making processes and sets standards for environmental education and awareness.

Furthermore, this legislation plays a crucial role in aligning Cameroon with international environmental standards and commitments. By providing a legal framework for environmental governance, Law No. 96/12 contributes to enhancing compliance with global environmental



agreements and fostering sustainable development practices within the country (Viillarin, 2020). Overall, Law No. 96/12 of August 5, 1996, represents a significant milestone in Cameroon's environmental management efforts by establishing a legal foundation for addressing environmental challenges, promoting sustainability, and safeguarding the country's natural heritage.

#### **7.1.1.2 Decree 2012/2809/PM: Managing Plastics in Cameroon**

In Cameroon, the issue of single-use plastics is intertwined with environmental legislation, particularly Decree N° 2012/2809/PM of September 26, 2012. This decree focuses on the sorting, collection, transport, recovery, recycling, and final treatment of waste, aiming to regulate waste management practices in the country. Despite efforts to address plastic pollution through regulations like the ban on non-biodegradable plastic bags, as seen in the law enacted in 2012, challenges persist in effectively managing single-use plastics.

The ban on non-biodegradable plastic packaging in 2012 was a significant step towards reducing plastic pollution in Cameroon. However, the continued use of single-use plastics in markets, as highlighted in recent reports, indicates a gap in enforcement and compliance with existing regulations. The smuggling of plastic bags from neighbouring countries like Nigeria further complicates the enforcement of bans and regulations related to single-use plastics.

The law's provisions on waste management, including sorting, collection, and recycling, are crucial for addressing the environmental impact of single-use plastics. Efforts to enhance waste recovery, recycling infrastructure, and public awareness are essential to mitigate the adverse effects of plastic pollution on the environment, human health, and wildlife. Additionally, promoting the use of biodegradable alternatives and fostering public-private partnerships for sustainable waste management practices can contribute to reducing the reliance on single-use plastics and improving overall environmental sustainability in Cameroon.

In conclusion, while Decree N° 2012/2809/PM of September 26, 2012, sets the groundwork for waste management in Cameroon, the persistent challenges related to single-use plastics underscore the need for continuous efforts to strengthen enforcement mechanisms, promote sustainable alternatives, and enhance waste management practices to combat plastic pollution effectively.

#### **7.1.1.3 Environmental License**

The management of single-use plastics in Yaounde, Cameroon, is closely linked to environmental legislation such as Order No. 001/MINEPDED of October 15, 2012, which

establishes conditions for obtaining an Environmental License concerning waste management. This order plays a crucial role in regulating waste management practices, including the handling of single-use plastics, to promote environmental sustainability and mitigate plastic pollution.

In the context of Order No. 001/MINEPDED, sustainable waste management practices are essential for addressing the challenges posed by single-use plastics. Implementing effective waste reduction, recycling, and disposal strategies in compliance with environmental regulations is key to minimizing the environmental impact of plastic waste. By aligning waste management practices with the conditions outlined in the order, stakeholders can work towards achieving a cleaner and more sustainable environment in Yaounde.

Furthermore, sustainable waste management practices, as required by Order No. 001/MINEPDED, should prioritize the reduction of single-use plastics through initiatives such as waste segregation, recycling programs, and public awareness campaigns. By integrating sustainable waste management practices with the regulatory framework provided by the order, Yaounde can move towards a more environmentally conscious approach to handling single-use plastics and overall waste management.

#### **7.1.1.4 Non-biodegradable Plastic Ban Law**

Single-use plastics management reveals the significant influence of legislative frameworks, such as Joint Order No. 004/MINEPDED/MINCOMMERCE of October 24, 2012. This regulatory measure specifically targets the importation and commercialization of biodegradable plastics within the local market. Article 7 of this joint order delineates stringent restrictions concerning the manufacturing, importation, possession, and commercialization, including free distribution, of non-biodegradable plastic packaging. This article particularly prohibits the circulation of plastic materials with a low density of 60 microns or less in thickness, underlining the government's stance on combating plastic pollution. Such legal provisions offer critical insights into the socio-economic dynamics and environmental consciousness surrounding plastic usage and management practices in Yaounde.

This law plays a crucial role in promoting environmentally friendly alternatives to traditional single-use plastics, aiming to reduce plastic pollution and encourage sustainable waste management practices. This law focuses on promoting the use of biodegradable plastics as an alternative to non-biodegradable single-use plastics. By regulating the importation and marketing of biodegradable plastics, the law aims to reduce the environmental impact of plastic waste in Yaounde.

#### **7.1.1.4.1 Compliance and Conformity: Anthropological Perspectives on Aligned Plastic Waste Management Practices**

In Yaounde, anthropologists study aligned plastic waste management practices, considering cultural, regulatory, and socio-economic influences. Compliance with regulations reflects environmental awareness, seen in sorting, recycling, and responsible disposal of single-use plastics. They explore community values, education, and resource access shaping these behaviours, as well as the impact of government and grassroots initiatives promoting environmental stewardship. Through ethnography, anthropologists provide insights into the drivers of aligned practices, offering recommendations for sustainable interventions. Understanding these dynamics is crucial for effective strategies in mitigating plastic pollution and fostering environmental responsibility in Yaounde.

##### **7.1.1.4.1.1 The Extended Producer Responsibility in Cameroon**

Joint Order No. 004/MINEPDED/MINCOMMERCE of October 24, 2012 introduces EPR principles into Cameroon's environmental regulations. EPR, a global concept since the 1990s, expands manufacturers' responsibilities to include managing end-of-life products, particularly through recycling. This approach, successful in countries like Germany, Japan, and South Africa, holds manufacturers responsible for recycling used plastics. In Cameroon, the adoption of EPR acknowledges the limitations of relying solely on state intervention to address plastic waste pollution. The legislation extends responsibility to plastic packaging producers beyond the point of sale, ensuring accountability for waste management. Specifically, Article 3 of the joint order mandates manufacturers, importers, and distributors of non-biodegradable packaging to manage their waste and implement measures to limit production and promote recycling and reuse.

An example of the successful application of EPR in Yaounde is the partnership agreement between HYSACAM and the leading brewery industry SABC, as reported in the Business in Cameroon Magazine on 17th April 2014. This partnership, known as "Plastic Recup," aimed to promote the recovery and recycling of plastic packaging from the SABC factories and its subsidiary SEMC. Consumers were encouraged to engage in this campaign through awareness and sensitization efforts. The project resulted in the collection of millions of plastic bottles, which were then processed by HYSACAM and made available to recycling companies for transformation into new products such as watches, bags, sweaters, and jugs.

These initiatives align with the government's legislation from October 2012, which stipulates that every manufacturer or distributor using non-biodegradable packaging must

establish guidelines to facilitate the recovery of the packaging for recycling, sale, or destruction. Such actions are essential for meeting environmental protection requirements and encouraging plastic reduction or recovery.

Photo 56 depicts HYSACAM's waste management practices, showing compacted plastics being prepared for sale to recycling firms. This offers insight into the interaction between people and the environment in the local context. From an anthropological perspective, the photo illustrates the transformation of discarded plastics into valuable commodities through HYSACAM's efforts, highlighting the interconnectedness of society, the economy, and the environment in waste management.

Additionally, SABC entered another partnership with Namé Recycling in 2018, aiming to collect, treat, and valorise plastic waste from SABC's industrial activities nationwide. The project successfully collected and recycled 38 million PET bottles and approximately 1350 tons of plastic waste between 2017 and 2018. The project's second phase focuses on domestic waste, aiming to collect 80% of plastic bottles. The French company IKEA used the recycled plastic waste to produce plastic furniture, resulting in a reduction of about 75,000 tons of methane in the atmosphere, equivalent to close to 1.6 million tons of CO<sub>2</sub>, with an investment of about 2.5 billion.

By aligning single-use plastics management practices in Yaounde with the regulations set forth in Joint Order No. 004/MINEPDED/MINCOMMERCE, the city can make significant strides towards reducing plastic pollution, promoting sustainable waste management, and fostering a cleaner and more environmentally conscious community.

#### **7.1.1.4.1.2 Banning Plastic Incineration**

The management of SuPs waste presents a stark contrast to the regulations outlined in Article 9 of the Joint Order. Despite explicit prohibitions against burning plastics in open air, discarding them in nature, or burying them, observed practices often deviate from these mandates. Informal waste disposal methods, such as burning plastic waste, persist due to a combination of limited access to proper waste management facilities and insufficient awareness of the environmental and health hazards posed by such actions. Moreover, the indiscriminate disposal of plastics in natural environments reflects deeply ingrained cultural attitudes towards waste disposal, where nature is sometimes regarded as an acceptable repository for waste materials. These behaviours underscore the complex socio-cultural factors shaping individuals' actions regarding waste management in Yaounde.

Research studies show the complex socio-economic factors that drive different waste management practices in Yaounde. The common use of informal disposal methods, such as burning plastics and throwing them away in natural environments, shows a disconnection between waste management rules and community behaviours. Traditional beliefs and cultural norms affect how individuals view waste disposal, often leading to practices that harm the environment.

To successfully address single-use plastics (SuPs) waste management in Yaounde, interventions must consider these socio-cultural complexities. They should raise awareness and encourage sustainable practices that align with local beliefs while reducing the environmental risks caused by improper waste disposal. In simpler terms, effective waste management strategies in Yaounde must take into account the city's unique socio-cultural factors to promote sustainable practices that are compatible with local beliefs and reduce environmental harm.

### **7.1.2 Enforcement Mechanisms and Compliance Measures**

Making the plastic ban work in Yaounde means grasping how rules interact with the city's social fabric. People's acceptance and compliance with these measures are deeply tied to social norms, beliefs, and practices. For example, using single-use plastic packaging for communal dining is a longstanding tradition deeply embedded in Yaounde's cultural events. The ban challenges this custom, impacting how hospitality and communal meals are practiced. Similarly, the belief in plastic's role in food hygiene leads to its use in markets and restaurants. This ingrained belief affects the community's acceptance of reduced plastic usage.

Furthermore, informal waste pickers and plastic traders rely on the plastic economy for their livelihoods. A ban on certain plastics disrupts their economic activities, leading to resistance. This highlights the need for regulations to consider how they affect existing social norms and economic practices. Effective enforcement requires aligning with Yaounde's existing sociocultural landscape. Local traditions offer opportunities for sustainable alternatives. For example, using woven baskets and plantain leaves for specific meals like "Achu" aligns with the plastic ban's goals while respecting cultural heritage.

Engaging with informal waste pickers and plastic traders is crucial. Understanding their economic dependence and providing alternative sustainable livelihood opportunities can mitigate resistance and ensure successful policy implementation. Community structures like markets and neighbourhood associations play a vital role. Engaging them is essential for fostering awareness, providing support for the transition to sustainable practices, and garnering

local support for the enforcement of the plastic ban. Integrating these structures into the regulatory process can lead to culturally sensitive and effective policy implementation.

### 7.1.3 Plastic Waste Governance Structure

Cameroon established a legal framework for environmental management through Law No. 96/12 of 1996. This law defines environmental concepts, assigns responsibilities, and outlines sanctions for violations. Additionally, the Ministry of Environment was created to oversee environmental and sustainable development policies. The Ministry has various directorates responsible for specific environmental functions. The Directorate of Norms and Control, for instance, defines environmental standards, manages plastic waste, and develops good practice guides. The Brigade within this Directorate enforces environmental regulations on the ground, conducting inspections and ensuring compliance by businesses and organizations.

This study highlights the role of the Environmental Inspection Brigade in confiscating banned plastics from merchants who do not comply with regulations. These confiscated plastics are weighed and destroyed annually. The legal framework for environmental management in Cameroon includes Law No. 96/12 of 1996 and Law No. 2016/007 of 2016. The latter law allows authorities to confiscate any property used for committing environmental offenses, including banned plastics.

The Environmental Inspection Brigade plays a crucial role in enforcing these regulations by conducting inspections, confiscating banned materials, and ensuring adherence to environmental standards. This case study exemplifies their role in seizing illegal plastic bags from merchants.



**Photo 71:** Impounded banned plastics by the MINEPDED Brigade  
**Source:** Mbanam Valentine, 20<sup>th</sup> February 2019

Cameroon faces a significant challenge in managing plastic waste, with plastic alone constituting 10% of the country's annually generated 3.7 million tons of waste (World Bank, 2021). To address this issue, the Ministry of Sustainable Development plays a leading role in collaborating with law enforcement agencies to enforce environmental protection laws, particularly those focused on plastic waste management. This collaboration aims to deter illegal activities like the manufacturing, commercialization, and importation of banned plastics. Additionally, trained customs agents work to control the smuggling of banned plastics across the country's borders. Legal instruments like waste management laws and environmental protection regulations further support these efforts, aiming to regulate waste management practices across various stakeholders in Cameroon.

Communication also plays a crucial role in the implementation of these policies. Sensitization campaigns are organized to raise awareness of plastic pollution, as illustrated by the image below, depicting a sensitization campaign organized by the women of the Ministry on the International Day of Women. These campaigns utilize various communication tools such as posters, stickers, and streamers to effectively convey their message to the public.



**Photo 72:** A sensitization campaign against plastic pollution was organized on the 8<sup>th</sup> of March, 2020, commemorating the Women's Day Celebration by the Female workers of MINEPDED.

**Source:** [www.minepded.cm](http://www.minepded.cm), 8 Mars 2020

The above photograph captures a poignant moment in the ongoing struggle against plastic pollution, as female workers of the Ministry of Environment, Protection of Nature, and

Sustainable Development (MINEPDED) organized a sensitization campaign on the 8th of March, 2020, in commemoration of Women's Day. The image depicts a scene of collective action and advocacy, with the women actively raising awareness about plastic pollution's detrimental effects on the environment.

We also see the women using various communication tools, such as banners, tee shirts to convey their message to the public. Their efforts reflect a deep sense of environmental stewardship and a commitment to effecting positive change within their community. The presence of these women in the forefront of this campaign highlights their agency and leadership in environmental advocacy and underscores the intersectionality of gender and environmental issues.

This image serves as a testament to women's active role in environmental conservation and the significance of their contributions to the broader sustainability movement. It encapsulates a moment of empowerment, solidarity, and collective mobilization in the fight against plastic pollution, showcasing the vital role of community-led initiatives in addressing environmental challenges.

Year	Quantity of plastics impounded (Kg)	The total amount of fines collected (4.000 XAF-25 000 XAF) for the Public Treasury
2014	324 359	//
2015	99 686	15 666 600
2016	173 052,82	26 349 000
2017	48 469.67	29 369 100
2018	110 250.665	10 173 000
2019	88 403	5 019 000
2020	21 874	2 271 500
2021	70 283	27 341 500
2022	26 889	18 703 500
2023	16 729.4	//
<b>TOTAL</b>	<b>979 996.4</b>	<b>134 893 200</b>

**Table 9:** MINEPDED National Statistics of impounded banned plastics since the enforcement of the law

**Source:** Mbanam valentine, 12<sup>th</sup> March 2024

The table above provides detailed information about confiscating banned plastic products in Cameroon. It shows the quantity of banned plastics seized each year, and the amount of fines collected. This data helps assess the effectiveness of the laws and enforcement activities related to environmental protection and waste management. It also explains how people, businesses, and communities respond to these regulations. Overall, the table is a valuable



resource for understanding the complexities of environmental governance and compliance in plastic waste management.

#### **7.2.4 The Typologies of Banned Plastics**

The ban on certain types of plastic bags, particularly those less than 60 microns, aims to reduce pollution and encourage the use of more sustainable alternatives. In response, some companies have redesigned their plastic products to meet eco-friendly, biodegradable or compostable standards. One such company, the "Decent Polybag" Industry in Kano State, Nigeria, owned by the Lee-Group, specializes in manufacturing various polybag products and holds a significant share of the Nigerian polybag market. They offer various services and products, including ultra-thin HDPE bags, LDPE polybags for deep freeze packing, and environmentally friendly options.

The company's manufacturing capacity is substantial, allowing them to meet the demand in Nigeria and neighbouring countries, including Cameroon. Wholesalers from Cameroon travel to Nigeria, primarily through land routes like the Batibo-Mamfe-Ekok highway or by sea via the Tiko wharf, which connects to Calabar in Akwa-Ibom state. The maritime routes offer a safer means of transportation, with shorter travel times to neighbouring Akwa-Ibom.

The typical wholesaler in Yaounde invests approximately twenty-two million XAF to procure around one thousand five hundred bags (23 tons). At the time of this study, the exchange rate between XAF and the Naira stands at 1 NGN = 1.37898 XAF. The total cost of the purchased cargo amounts to roughly 22,000,000 XAF (equivalent to ₦15,985,800). This expenditure represents the average financial outlay for each business trip. The pricing of the various types of plastics contained in each bag also varies. For instance, the ultra-thin transparent LDPE is retailed at ₦9,700 (13,349.3 XAF), the two-strip-bag LDPE in black and yellow colours is priced at ₦11,500 (15,826.5 XAF), and the Standard LDPE T-shirt bags at ₦10,500 (14,450.3 XAF).



**Photo 73:** A plastic of 10 000 pcs of PE  
**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020



**Photo 74:** A packet of the two-strip-bag LDPE Black and Yellow colours (32cmx27cm)  
**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020



**Photo 75:** A 12 $\mu$  plastic bag called a two-strip-bag LDPE Black and Yellow colours  
(32cmx27cm)  
**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020

The LDPE two-strip-bag, colloquially called "les rayés" among traders, is priced between 20,000-25,000 XAF, subject to fluctuations influenced by exchange rates and seasonal variations. These bags are available in various colours, such as black, white, and blue. The pricing dynamics are affected by favorable exchange rates, influencing buyers' purchasing power and subsequently impacting the cost at which they buy and sell the stock.

These LDPE bags are particularly favored by traders dealing in bulk commodities and tailors, shoe sellers, and cloth vendors. The bags are also used for packaging goods in large quantities, reflecting the correlation between the type of polybag used and the quantity of goods being packaged. The LDPE two-strip-bag is typically purchased in bundles, each containing ten packets, and is commonly acquired by wholesalers who then distribute them to hawkers and small retailers.

Despite falling below the expected  $61\mu$  thickness and being considered contraband, these polybags remain in high demand due to their affordability. However, sellers often express concerns about minimal profit margins due to the low cost of packaging. For instance, a cobbler charging 200 XAF for a shoe repair may find it economically viable to use a 25 XAF polybag, allowing them to retain 175 XAF.



**Photo 76:** Standard LDPE T-shirt-bags, a packet of 50 pcs (40cmx27cm)  
**Source :** Mbanam Valentine, 8<sup>th</sup> May 2020



**Photo 77:** A 10 $\mu$  Standard LDPE T-shirt-bags, An ultra-thin (PE) Polyestherene (40cmx27cm)

**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020

The image above displays a packet of standard LDPE T-shirt bags, while the photo below features a sample polybag. These LDPE T-shirt bags, known as "les gros noir" among traders in Yaounde, are priced between 25,000 XAF (Durapak) and 26,000 XAF (Ocean). A bundle of these bags is sold for 6,000 XAF, and a single packet is priced at 700 XAF, containing 100 polybags. These bags are sought for their dark colour, offering discretion and concealment for packaged items.

However, their lightweight nature limits their capacity to carry heavy items, making them suitable for lighter goods. Additionally, smaller-sized polybags, known as "les petit noir," are used for smaller and lightweight items, being cheaper at 5 XAF per polybag. While their black colour makes them preferable to transparent polybags, their lightweight and fragile nature restricts their ability to carry substantial or sharp-edged objects. Traders selling foodstuffs often use these polybags to pack puffballs, fruits, "garri," and beans. When discarded, these lightweight polybags are easily carried away by the wind, posing environmental challenges.



**Photo 78:** Standard LDPE T-shirt-bags A packet of 50 pcs (32cmx27cm)  
**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020



**Photo 79:** An ultra-thin polybag (32cmx27cm)  
**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020



**Photo 80:** A packet of 100 pcs white plain polyethene/Ultra-thin LDPE polybag (27x20cm)  
**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020



**Photo 81:** An 11 $\mu$  sample of 100 pcs white plain polyethene/Ultra-thin LDPE polybag (27x20cm)

**Source:** Mbanam Valentine, 8<sup>th</sup> May 2020

The ultra-thin LDPE polybags, also known as the white plane polyethylene bags, are affectionately referred to as "le Nigeria" by traders due to their origin. Priced at 25,000 XAF, retailers can acquire a bag containing ten bundles, each comprising ten packets sold at 3,000 XAF each. A packet contains 100 polybags and is retailed for 300 XAF. These polybags are widely utilized by traders, shopkeepers, hawkers, small-scale traders, pharmacies, supermarkets, and households. Retailers sell these polybags for 5 XAF each. Their popularity stems from their practical size and functionality as packaging material. This type of polybag is highly sought after due to its affordability and convenience for single-use, particularly for packaging wet items.

### **7.2.5 Conformed Plastics and Adaptations**

In Yaounde, the plastic bag commonly called "*les bleue rayé*" or blue strips, which is thicker, than 60 microns serves as a convenient and cost-effective option for locals to carry their belongings. Its sturdiness allows for transporting items and using it a time which is especially beneficial in a city where walking and public transportation are common. Aside from its practicality the "*bleue rayé*" may have importance within Yaounde possibly associated with social contexts or conveying particular meanings. It is sold at 100 XAF and it remains affordable for people across income brackets further ensuring its prevalence in life.

Viewing the "*bleue rayé*" through a perspective unveils its complex nature by highlighting how it combines utility, cultural traditions and economic accessibility. While



recognizing the issues linked to plastic bags it underscores the importance of striking a balance between functionality, cultural significance and environmental consciousness, for Yaoundes future.



**Photo 82:** Conformed Plastics above 61 microns  
**Source:** Mbanam Valentine, 12<sup>th</sup> February 2023

Santa Lucia, a well-known supermarket chain in Yaounde, has introduced branded "*sac plastique tissé*", "*sac plastique non tissé*" (Woven plastic and non-woven plastic bag) and thicker plastic bags in response to government regulations on plastic bag conformity. These reusable bags, priced between 100 and 4500 XAF, serve a dual purpose: they are not only used for shopping but also prominently display the Santa Lucia brand name and branch information. This approach demonstrates the company's understanding of consumer behaviour and the importance of brand visibility. By leveraging the daily use of these bags, Santa Lucia aims to reinforce brand recognition and potentially influence customer choices.

Santa Lucia's initiative illustrates the complex interplay between environmental regulations and consumer societies. While these regulations promote sustainability, businesses can also navigate them to strengthen their brand identity and potentially sway consumer behaviour. As plastic bag regulations continue to evolve, it would be interesting to explore the long-term social and cultural implications of such initiatives through further research.



**Photo 83:** « Sac plastique tissé »  
**Source :** Mbanam Valentine, 10<sup>th</sup> January 2024

Yaounde's travel culture emphasizes reciprocity, hospitality, and resource sharing through the custom of carrying bread as a gift for hosts. This tangible symbol of respect and appreciation strengthens social bonds and is facilitated by bread vendors in motor parks. While seemingly mundane, buying bread becomes a symbolic gesture reinforcing hospitality. Further research could explore the practice's historical and cultural roots.

However, bread in motor parks also presents an economic opportunity. Individuals resell purchased bread, often in branded bags, creating micro-entrepreneurship. This highlights the adaptability and resourcefulness of Yaounde's informal economy and the unforeseen implications of consumer goods. Examining both aspects provides a richer understanding of Yaounde's interconnected social and economic landscape.

This observation highlights the complex relationship between branded goods, informal economies, and micro-entrepreneurship. The branded bags, intended for broader marketing by Santa Lucia, become unintended tools for these entrepreneurs, blurring the lines between intended and unintended consequences of consumer goods. Further research could explore the motivations and experiences of the individuals involved, as well as traveler perceptions of the branded bags, to gain a deeper understanding of this phenomenon within the context of Yaounde's informal economy and consumer behaviour.





**Photo 84:** A vendor and a customer carrying bread in branded plastic bags in a motor park in Mvan

**Source:** Mbanam Valentine, 12<sup>th</sup> January 2024

Yaounde pharmacies offer branded plastic bags for dispensed medication, complying with environmental regulations and providing convenience to customers. These "conformed" bags likely thicker and reusable, present an interesting case study from an anthropological perspective. The branding on these medical bags raises questions. While offering practical solutions, they might also function as subtle marketing tools, potentially influencing customer choices and reinforcing brand recognition. This observation highlights the potential blurring of lines between healthcare practices and consumer culture in Yaounde. Further research could explore the perceptions and experiences of both pharmacists and patients regarding the practicality, environmental impact, and potential marketing aspects of these bags, offering valuable insights into the evolving dynamics of healthcare and consumer behaviour.



**Photo 85:** A prototype of a branded plastic bag used by pharmacies in Yaounde

**Source:** Mbanam Valentine, 3<sup>rd</sup> October 2023

### **7.3. Cultural Responses to National Legislation on Single-Use Plastic Management**

The way people in Yaounde are adapting to the new laws on SuPs is fascinating. On one hand, it is challenging because some of the plastic items they are accustomed to using are now prohibited, requiring them to adjust their routines. But on the other hand, it is also an opportunity for them to explore innovative ideas and embrace more eco-friendly alternatives. Engaging the community is crucial as it facilitates the exchange of ideas, thoughts, and the development of solutions that benefit everyone. Examining how different groups within the community perceive and utilize these new regulations can provide valuable insights into what is working well and what needs improvement.

#### **7.3.1 Challenges and Opportunities in Implementing Plastic Bans**

Grasping the ins and outs of enforcing plastic bans sheds light on the complex dance between government rules and the social and cultural influences that impact how these measures are received and followed within a particular community. This study unveils the strong ties between formal regulations and the ingrained societal customs, behaviours, and economic structures that mold how plastic is used and discarded within the community.

One of the challenges in implementing plastic bans lies in understanding the cultural significance of plastic usage within the local context. For example, certain traditional practices and rituals may involve using specific plastic items, and these cultural considerations must be carefully addressed to avoid unintended consequences or resistance to the ban. Certain traditional practices and rituals may involve the use of specific plastic items. For example, during cultural ceremonies, traditional events, or wedding celebrations, there are customary practices of presenting gifts or offerings in plastic containers or packaging. This could include items such as a mess kit usually for the bride on her wedding day, plastic bowls, containers, or bags used to hold symbolic offerings or traditional foods. Additionally, in some cultural rituals, plastic decorations or items are used as part of ceremonial displays or offerings.

Furthermore, specific plastic items may be used as symbolic or practical components in certain traditional healing practices or spiritual ceremonies. This involves the use of plastic containers for holding ritualistic items, or the incorporation of plastic elements into ceremonial objects or artifacts. Traditional healers use plastic bottles, containers, and jars to store herbs, powder, or oil used in healing practices because they ease organization, protect from moisture and pests, and are convenient for transportation.

The economic implications of a plastic ban in Yaounde are significant and cannot be overlooked. Many individuals in the city are directly or indirectly involved in plastic production, distribution, or recycling activities, which form a crucial part of their livelihoods. For example, people manufacture small-scale plastic, producing plastic bags, containers, or packaging materials. These products are widely used in various sectors, including retail, food, and agriculture, and the livelihoods of those involved in their production are closely tied to the demand for these plastic goods.

Furthermore, the distribution of plastic products forms another economic aspect that supports numerous individuals in Yaounde. From small-scale vendors selling plastic goods in local markets to larger distributors supplying plastic items to businesses and retailers, a significant portion of the population is involved in distributing and selling plastic products. Additionally, recycling plastic materials is an important economic activity for many individuals in Yaounde. There are informal waste pickers and recyclers who collect, sort, and sell plastic materials to recycling centers or other businesses involved in the reuse of plastic.

Therefore, any regulatory actions, such as a ban on certain types of single-use plastics, can directly impact the livelihoods of these individuals. It is essential to consider the economic dependencies and the potential consequences on employment and income generation when implementing measures to reduce plastic usage. A comprehensive approach is needed to tackle the economic consequences of a plastic ban. This approach should consider the livelihoods of individuals engaged in plastic-related activities and offer assistance for alternative sustainable opportunities. This will help minimize any negative impact on the local economy.

Opportunities for meaningful engagement and collaboration with the local community can be found amidst these challenges. Anthropological insights can be integrated into the design and implementation of plastic bans to ensure that regulatory actions align with the community's cultural values, practices, and economic structures. This approach fosters dialogue, builds trust, and involves community members in decision-making processes. By doing so, policies and initiatives can resonate with local needs and contribute to the community's well-being. Additionally, leveraging existing community networks and social structures can help disseminate information, promote sustainable practices, and enforce the plastic ban in a culturally sensitive and effective way.

### **7.3.2 Community Engagement in Plastic Ban Implementation**

In Yaounde, community engagement is crucial in successfully implementing the plastic ban. One way this is achieved is through educational campaigns and workshops organized by local authorities and councils. These workshops are held in various neighbourhoods to educate residents about the harmful effects of single-use plastics on the environment and to promote the benefits of using alternative, eco-friendly products.

Additionally, community-led initiatives are making a tangible impact in implementing the plastic ban. For example, in Yaounde 6 Council, local organizations have actively involved community leaders and recruited youths during long holidays to participate in community cleanup campaigns. These initiatives are carried out in collaboration with Namé Recycling, a plastic recycling firm that collects waste plastic bottles from the streets and streams. By involving the community in these efforts, residents are developing a sense of ownership and responsibility for managing plastic waste in their neighbourhoods, contributing to the effective implementation of the ban and fostering a sense of environmental stewardship among the residents.

Moreover, local businesses are being actively engaged in the plastic ban implementation. The councils are working with businesses to encourage the use of biodegradable packaging and are offering incentives for businesses that comply with the ban. This collaborative approach is helping the community perceive the ban as a joint effort, promoting shared responsibility and resulting in better and more sustainable management of single-use plastics in Yaounde.

### **7.3.3 Evaluating Effectiveness of Plastic Ban Regulations**

Assessing the impact of the plastic ban regulations in Yaounde since 2014 involves thoroughly examining these measures' social, cultural, and environmental effects. Anthropologists have delved into the complex web of interactions between the ban and local communities, studying how it has influenced consumer behaviour, traditional packaging practices, and waste management systems. Through ethnographic research and community engagement, anthropologists have sought to understand how the ban has reshaped social norms, economic activities, and environmental awareness within Yaounde's diverse neighbourhoods.

Furthermore, we have closely examined the effects of the plastic ban on various social groups, including informal waste pickers, small businesses, and marginalized communities. Empirical research has revealed the nuanced and sometimes unequal distribution of the ban's

impact, shedding light on how power dynamics and social accountability intersect in plastic regulation. This approach has provided a meaningful understanding of how various segments of the population have adapted and coped with the ban, contributing to a more comprehensive comprehension of its social repercussions.

## **7.4 Local Practices and Ethnographic Studies in Plastic Management**

Seeking to improve government policies on plastic waste management is a complementary effort to curbing plastic waste pollution through bans. However, the ban's implementation has been deemed ineffective (Achu, 2017). The commercial use of lightweight polybags continues to thrive in our environment, with many traders persisting in using them for packaging, in defiance of the laws prohibiting these plastics. In the following paragraphs, we will elaborate on the numerous limitations of the waste governance policies.

### **7.4.1 Socio-Cultural Implications of Polybag Bans**

The concept of the market holds a dual significance. Firstly, it denotes the physical space where food commodities and craft items are exchanged. Secondly, it characterizes an entire economic system based on the determination of prices through the interplay of supply and demand (Rosman et al., 2009). The law of supply and demand governs the exchange system, with money serving as the medium of exchange, unlike the barter system of the past. Money, particularly in cross-border trade involving different currencies, introduces the complexity of varying currency rates for the parties involved in business transactions.

The relationship between the seller and the buyer in a market system is rooted in expressing a seller's need, which the buyer is willing to fulfill. The fundamental premise of a market system is to generate profit, achieved by buying at a low price and selling at a higher one. Transactions in a market system are characterized by bargaining over price, where the buyer seeks to acquire goods or services at the lowest possible cost. This negotiation process ultimately leads to an agreement where both parties are content. Money plays a crucial role in a market system, serving as a medium of exchange and determining expected value for goods and services. In a capitalist market economy, all economic behaviour is evaluated in market terms, with individuals seeking to secure their best deal. Anthropologists have been intrigued by the factors influencing decision-making and whether economic considerations solely drive these decisions (Rosman et al., 2009).

### **7.4.2 The Friction: Public Perception of the Ban**

In navigating the controversy surrounding the plastic ban in Yaounde, the government aimed to encourage a circular economy by promoting the production of thicker plastics above 60 microns, a measure intended to enhance durability and facilitate recycling. However, this initiative inadvertently increased the cost of plastics, prompting unease among local traders who were confronted with higher purchase prices. Consequently, many traders expressed discomfort with the economic implications of the ban, leading to a reluctance to fully adhere to the government's directive. Instead, they advocated for exploring alternative materials to replace the banned plastics, emphasizing the necessity of cost-effective solutions that align with their economic realities. This divergence in perspectives highlights the complex interplay between environmental policies, economic livelihoods, and local actors' practical challenges. This underscores the need for a holistic approach that addresses environmental sustainability and the socioeconomic dynamics of plastic use in Yaounde.

The resistance to the ban on non-biodegradable plastics below 60 microns in Yaounde is deeply rooted in the high demand and widespread use of these lightweight plastics in various commercial and household settings. Despite the legal framework imposing significant penalties for these plastics' manufacturing, distribution, and use, their ubiquity in small stores, markets, and supermarkets reflects their integral role in modern shopping practices. The ban's implementation faces challenges due to the entrenched reliance on these plastics for packaging various items such as tomatoes, sugar cubes, clothing, fruits, biscuits, and cooking oil. The sentiment expressed by a trader in the Mokolo market, "je ne peux pas vendre sans les plastiques," underscores the practical dependence on these plastics for everyday commercial activities, highlighting the complex interplay between regulatory measures and entrenched consumer behaviours.

The decision to ban plastics in Cameroon was made without adequate representation of women, who are the country's primary users of plastic packaging. With only 33 percent of women in Parliament and male-dominated Ministries, many women do not understand or support the ban. Some activists argue that the government's approach was flawed and that involving women in the ban's implementation could have led to better results. They emphasize that policies made without women are likely to fail, considering that women make up a significant portion of the population. Eileen Manka stressed the importance of women's involvement in decision-making, leading to policies that better address women's needs. She cited the example of the ban making it difficult for women to find alternatives for wrapping fufu corn.

Additionally, as a business owner whose operations heavily rely on lightweight plastic bags, the ban on these materials has presented significant challenges. Like many others in Essos neighbourhood, our business has been built around the convenience and affordability of these plastic bags. The public perception of the ban has been mixed. While some customers understand the environmental concerns and support the ban, others have expressed frustration at the inconvenience it has caused. We have had to adapt our packaging practices, which has increased our operational costs and, in some cases, led to customer dissatisfaction due to the change in packaging. The ban has created friction within the community, with some customers reluctant to adapt to alternative packaging options. It is a complex situation that requires careful navigation to balance environmental responsibility with the practical needs of our business and our customers' expectations.

#### **7.4.3 Ethnographic Analysis of Polybag Ban Shortcomings**

Through empirical studies, it has become evident that authorities' enforcement of the ban on lightweight plastic bags is encountering notable challenges. Smugglers are capitalizing on porous borders to import banned plastics from neighbouring countries, taking advantage of the subtle differences between banned and authorized plastics. Furthermore, there is resistance to the ban from hawkers, small shop owners, and "buyam sellam," who argue that alternative materials like paper or leaves are not suitable for their products. Many individuals have established their livelihoods around the plastic bag business, and discontinuing it would result in substantial financial and human resource losses, potentially leading to job losses throughout the distribution chain.

#### **7.4.4 Community Responses to Polybag Prohibitions**

Several respondents expressed that the government's decision to ban these plastics seemed incongruous given more pressing environmental issues. They highlighted other social, political, and economic challenges facing the country, such as high unemployment rates, the plight of jobless graduates, elevated crime levels in certain areas, burdensome taxes on small businesses, and the soaring prices of essential commodities.

Regarding the awareness of the ban on lightweight plastic bags, responses varied. While many claimed to be aware of the ban, the field results suggest a more complex situation. It appears that the authorities have successfully disseminated information about the ban, as indicated by the high awareness rate among Yaounde city dwellers. However, despite this heightened awareness, the demand for these plastic bags remains substantial, painting a contradictory picture of the ban's impact.

#### **7.4.5 Cultural Adaptations and Ambiguities in Response to Polybag Bans**

According to Patrick Murray's argument, the decision faced by the people of Yaounde regarding whether to stop using single-use plastics or continue using them despite their known environmental threats is a very complex issue. This complexity arises from the deep-rooted dependence on these plastics and the differing views on the severity of their environmental risks. There are varying opinions on the extent of these plastics' environmental impact, with some people believing that the reported environmental consequences are exaggerated.

In simpler terms, the choice for people in Yaounde to stop using single-use plastics or continue using them despite their environmental harms is a complicated matter. This is because people rely heavily on these plastics, and there are differing views on how severe their environmental impact is. Some people think that the reported environmental consequences are overstated.

*“This is one of the problems with gauging opinion on an issue the public has not given a lot of thought. The ultimate goal may seem worthy at first, but support wanes a bit when people consider how it might affect them in its implementation,”* Patrick Murray.

Plastics are known to break down after a very long period. This breaking down process produces bits of these plastics, also known as microplastics that are a significant threat to marine life (Ahamad et al., 2022). In addition, highly tiny pieces of plastic used in certain products like cosmetics can be caused to break down from larger plastic objects. Therefore, it was essential to investigate among the Yaounde city dwellers to find out if they were aware of microplastics in the first place.

Some respondents claimed to have heard much about microplastics; others never heard. However, some admitted having a shallow knowledge about them. Much must be done in this area to sensitize the public. Those who claimed to have some knowledge about them were those with a tertiary level of education. Most of those with very little information or had not even heard about it were those with a primary level of education.

Many users claimed that there have not been able to find a corresponding substitute to the highly appreciated light plastics. Traders and some other users argued that even though the Government gave them a one-year period of grace to do away with the old habit of using the light banned plastics and adapting to a new mode of life without these plastics. They still needed much time for the uneasy transition. “People have been using plastics for many years, and they



cannot be asked to stop using them, just like that,” argued an interviewee. Another added, “What are we going to use to wrap the things of the customers?”

**7.4.6 Cultural and Economic Implications of Banned Plastics Trade**

The trade of banned plastics in Yaounde carries significant cultural and economic implications. On a cultural level, the continued circulation of banned plastics reflects the persistence of traditional consumer habits and the enduring demand for these items within the local population. This underscores the deeply ingrained role of plastic products in daily life and traditional practices, posing a challenge to the cultural shift necessitated by the ban. Economically, the trade of banned plastics sustains a parallel informal economy, providing livelihoods for numerous individuals, particularly young entrepreneurs who engage in the semi-wholesale and retail aspects of the trade. However, this economic activity exists within a precarious legal and regulatory framework, exposing traders to risks such as harassment and confiscation of goods by authorities. The clandestine nature of the trade, with banned plastics being concealed and selectively offered to customers, reflects the adaptive strategies traders employ to navigate the regulatory landscape while meeting consumer demand.

Our key informant, who has been involved in the plastic trade for around ten years and currently operates as a semi-wholesaler, offers valuable insights into the world of plastic trading. He invests a significant amount of money in new stock from his wholesaler, highlighting the profitable nature of the business. However, he also describes the risks involved, particularly the harassment they face from authorities trying to seize their goods. Despite these challenges, the potential profits make the risks worthwhile, with the informant detailing the monthly earnings of approximately 80,000 XAF for a semi-wholesaler.

The trade of banned plastics is conducted discreetly, with shopkeepers hiding these items until specifically requested by customers. This covert approach is necessary due to the periodic checks carried out by the plastic ban repression brigade, prompting swift actions to hide the contraband items from the authorities. This cat-and-mouse dynamic reflects the complex interplay between regulatory enforcement and traders' strategies to continue their operations within the bounds of legality and profitability.

The table below provides a comprehensive overview of the polybag trade, detailing various categories of polybags, their purchase prices per bag, and the presumed benefits of each category. This data offers valuable insights into the economic dynamics of the polybag market, shedding light on the costs and potential profits associated with different types of polybags, and their implications for traders and wholesalers in the industry.

<b>Polybag Category</b>	<b>Purchase Price/ bag</b>	<b>Profit /XAF</b>
Two-strip-bag LDPE Black and Yellow colours	20.000-25.000	5.000
Standard LDPE T-shirt-bags Big black	25.000-26.000	7.500
Standard LDPE T-shirt-bags Small black	25.000	12.000
White plain polyethene	25.000	15.000

**Table 10:** Profit made by a semi-wholesaler from each bag sold.  
**Source:** Mbanam Valentine, 18<sup>th</sup> May 2019

## 7.5 Technological Innovations and Alternatives

In the context of compliance with environmental policies in Yaounde, technological innovations and alternatives play a crucial role in addressing the challenges posed by single-use plastics. Innovations such as biodegradable and compostable alternatives to traditional single-use plastics offer promising solutions to reduce environmental impact. Additionally, technological advancements in plastic waste management, including recycling and upcycling processes, contribute to a more sustainable approach to plastic usage. Furthermore, developing eco-friendly packaging materials and implementing innovative waste management technologies are helping to mitigate the negative effects of single-use plastics on the environment in Yaounde. These technological innovations and alternatives align with environmental policies and pave the way for a more sustainable and eco-conscious approach to plastic usage in the city.

### 7.5.1 Biodegradable and Compostable Alternatives to Single-Use Plastics

Yaounde is facing a growing problem of plastic waste management. Single-use plastics, such as plastic bags and bottles, contribute to this problem. To address this issue, there is a need for biodegradable and compostable alternatives to single-use plastics. According to a study by Njume et al. (2020), using biodegradable and compostable alternatives can significantly reduce the amount of plastic waste generated in Yaounde. However, the success of this approach depends on the compliance of single-use plastics management to policies in Yaounde. The government of Cameroon has implemented policies to regulate the use of single-use plastics in the country. For instance, the Ministry of Environment, Protection of Nature and Sustainable Development issued a decree in 2014 banning the production, importation, and commercialization of non-biodegradable plastic bags with a thickness of less than 60 microns.

However, implementing this policy has been challenging due to lacking enforcement and public awareness. As noted by Tchakounte et al. (2020), there is a need for effective

enforcement mechanisms and public education campaigns to ensure compliance with the policies. In conclusion, using biodegradable and compostable alternatives to single-use plastics can effectively solve the plastic waste management problem in Yaounde. However, the success of this approach depends on the compliance of single-use plastics management to policies in Yaounde. The government of Cameroon has implemented policies to regulate the use of single-use plastics. However, there is a need for effective enforcement mechanisms and public education campaigns to ensure compliance with the policies.

Understanding the compliance of single-use plastic management to policies in Yaounde necessitates exploring viable alternatives, particularly biodegradable and compostable materials. This section delves into their potential, challenges, and role in navigating the complex landscape of plastic usage. Biodegradable and compostable materials offer hope in the fight against plastic pollution. Defined as materials that decompose naturally under specific conditions (Kumar et al., 2021), they hold the potential to significantly reduce plastic waste accumulation and its associated environmental burden. Several promising alternatives exist for various single-use plastic applications:

#### **7.5.1.1 Plant-Based Polymers**

Materials like polylactic acid (PLA) derived from sugarcane or corn starch offer compostable alternatives to plastic bags, cutlery, and containers (Noda & Fujita, 2016). PLA bags offer a glimmer of hope. They decompose under controlled composting conditions, returning nutrients to the soil (Kumar et al., 2021), aligning with Yaounde's growing interest in organic farming and circular economies. Additionally, they are derived from readily available plant sources and offer comparable strength to traditional plastic bags. However, challenges like cost and limited composting infrastructure exist. Overcoming these requires a collaborative effort: government incentives, investment in composting facilities, and consumer education campaigns can pave the way for a more sustainable future in Yaounde, one compostable bag at a time.

The government of Cameroon has announced plans to start producing other types of bio-degradable food packaging materials in partnership. The development of businesses that focus on eco-friendly innovation and a circular economy, which involves reusing, repairing, refurbishing, and recycling existing materials and products for as long as possible, can also help increase the production of inexpensive and versatile alternatives to conventional, non-biodegradable plastic.

#### **7.5.1.2 Biodegradable Packaging**

In the context of conformity to policies in Yaounde, Armelle Sidje Tamo's work holds significant relevance. She envisions Cameroon playing a pivotal role in combating deforestation by leveraging the transformation of bananas. Through her establishment of PRA (Products Related to the Agricultural Sector), a company specializing in converting banana stems into biodegradable packaging such as bags, cartons, and paper rolls, she aims to offer an ecological substitute for single-use plastics. Notably, her initiative aligns to provide biodegradable plastics as alternatives to single-use plastics, thereby contributing to policy conformity in Yaounde. By sourcing from local producers and involving trained rural women in bioplastic manufacturing, Armelle's endeavour economically empowers small-scale farmers and women and exemplifies the creation of value from waste. This innovative approach not only supports policy adherence but also serves as an inspiration to the youth facing unemployment in the region. These plastics, often composed of cellulose or biopolymers, break down under specific conditions but may not be suitable for home composting (Hussain et al., 2018).

The process of making plastic biodegradable bags begins with the extraction of cellulose from plantain suckers. After boiling, the cellulose fibers become significantly solid. These solid fibers, in the form of cartons, are then transformed into rolls of paper, considering the grammage or thickness. This transformation involves converting the solid cellulose fibers into cartons, which are then further processed into paper rolls. These rolls of paper can then be used as the base material for producing biodegradable bags, offering an environmentally friendly alternative to traditional plastic bags.



**Photo 86:** Biodegradable plastic bags produced by Armelle Sidje.

**Source:** TV5 Monde, 4<sup>th</sup> October 2019

### 7.5.1.3 Edible Films

By governmental initiatives addressing plastic pollution, there is a growing focus on developing technological alternatives that align with sustainable practices. An illustrative instance of this trend is the creation of biodegradable films derived from natural ingredients

such as starch or gelatin. These pioneering films offer eco-friendly substitutes for food packaging and contribute to the mitigation of plastic waste. By integrating these biodegradable materials into food packaging, the government's objectives of promoting sustainable practices and reducing plastic pollution can be effectively bolstered. Moreover, these films' use of natural ingredients underscores a dedication to eco-conscious solutions, aligning with broader aims of environmental preservation and sustainable development.

In addition to the promising potential of seaweed-based films as sustainable food packaging solutions, a student from the University of Yaounde 1 in Cameroon has made a significant contribution to the research. This study delves into incorporating essential oils, renowned for their antimicrobial properties, to further enhance the films' efficacy (Potravinarstvo Slovak Journal of Food Sciences, 2023). The applications of these films are diverse, encompassing the preservation of fruit and vegetable freshness and the extension of dairy product shelf life. Their biodegradability and renewable sourcing offer distinct advantages over traditional plastics, although challenges such as cost and water barrier limitations must be addressed. Ultimately, the review compares seaweed-based films to other sustainable options, highlighting their unique strengths and paving the way for a more eco-conscious future of food packaging (Mohee & Unmar, 2007).



**Photo 87:** Seaweed-based film plastics

**Source:** Sustainable Packaging Summit, 5<sup>th</sup> February 2024<sup>84</sup>

A government administrator has acknowledged that various stakeholders have presented certain plastics to the government, claiming they are biodegradable and thus suitable alternatives to the banned plastics. However, the administrator has noted that these plastics lack certification from an authorized body. This admission underscores that, despite the intention to

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<sup>84</sup><https://packagingeurope.com/news/accelerator-programme-to-scale-up-seaweed-based-thin-films-revealed-by-lonely-whale/10481.article>

provide environmentally friendly alternatives, the authenticity and verifiability of the biodegradability claims have not been substantiated by an official certification process.



**Photo 88:** A government official presenting a biodegradable plastic without certification  
**Source:** Mbanam Valentine, 12<sup>th</sup> March 2024

Government officials have introduced and delineated another category of degradable plastics without verifiable biodegradable plastics. It was admitted that these plastics are not entirely composed of bio-based materials but consist of approximately 60 per cent biodegradable components and 40 per cent non-biodegradable cellulose. It was further explained that when the biodegradable portion, such as starch, decomposes, the non-biodegradable elements persist in the environment, posing a risk of pollution. This situation does not align with the principles of a circular economy, mainly if these plastics are not effectively collected and managed.



**Photo 89:** Degradable plastic in MINEPDED  
**Source:** Mbanam Valentine, 12<sup>th</sup> March 2024

### 7.5.2 Navigating the Hurdles: Challenges and Considerations

As a result of empirical study done in Yaounde, it has been found that incorporating technological alternatives to address plastic pollution is a complex but interesting area of

anthropological research. Biodegradable and compostable alternatives are promising, but there are challenges in integrating them into existing cultural systems in Yaounde. These challenges are deeply rooted in human behaviours, beliefs, and practices, requiring a nuanced anthropological approach to understand them fully. By studying these challenges in Yaounde, we can develop culturally sensitive and sustainable solutions to fight plastic pollution in the city.

In simpler terms, a study conducted in Yaounde shows that using technology to address plastic pollution is a complex but interesting area of anthropological research. Biodegradable and compostable alternatives are promising, but there are challenges in integrating them into existing cultural systems in Yaounde. These challenges require a nuanced approach to understand them fully. After studying these challenges in Yaounde, we have perceived that solutions can be developed that are culturally sensitive and sustainable to fight plastic pollution in the city.

#### **7.5.2.1 Cost**

In Yaounde, there is a growing recognition of the need for sustainable practices, as evidenced by a discernible inclination among botanical entities, enterprises, and plastic manufacturing firms to shift towards biodegradable and compostable alternatives. However, the high cost of production is a significant obstacle in this transition (Kumar et al., 2021). Biodegradable and compostable alternatives are more expensive to produce than conventional plastics, making them less affordable and hindering their widespread adoption within the local industry. This financial constraint affects the economic feasibility of these alternatives and raises concerns about their accessibility and practicality for businesses operating within Yaounde's socio-economic landscape. In summary, while there is a growing interest in sustainable practices in Yaounde, the high cost of biodegradable and compostable alternatives remains a significant barrier to their widespread adoption.

High production costs for new technologies create a challenge. We need to understand how this affects the local economy and people. This complex situation requires solutions that are both environmentally friendly and affordable for everyone. Studying these costs through anthropology helps us see how different social groups are impacted. This allows us to design solutions that are fair and inclusive, ensuring a smooth transition away from traditional plastics for a more sustainable future.

#### **7.5.2.2 Composting Infrastructure**

The scarcity of composting facilities in Yaounde poses a significant challenge that could hinder the widespread adoption of biodegradable and compostable alternatives within the local context (Nkoa et al., 2023). Composting facilities play a pivotal role in appropriately disposing and managing biodegradable waste, including compostable packaging materials. In the absence of sufficient composting facilities, the potential environmental advantages of these alternatives may not be fully realized, as the lack of adequate waste management infrastructure could result in improper disposal and impede the biodegradation process.

This constraint impacts the feasibility of utilizing biodegradable and compostable materials. It raises concerns about the effectiveness of transitioning to these alternatives without proper waste management infrastructure. Addressing the scarcity of composting facilities in Yaounde is crucial for establishing a supportive environment that facilitates the effective implementation and utilization of biodegradable and compostable alternatives, maximizing their environmental benefits and contributing to sustainable waste management practices within the local community.

### **7.5.2.3 Consumer Awareness**

A sufficient comprehension of appropriate disposal and composting techniques can impede their efficacy in various ways, encompassing environmental pollution and the generation of substandard compost (Kuo & Kim, 2020). Inappropriate waste disposal can give rise to environmental pollution, affecting the quality of soil, water, and air. Ineffective composting methods may yield low-quality compost, leading to resource wastage and missed prospects for sustainable waste management and soil enhancement. Mitigating this knowledge gap through educational initiatives and accessible resources can enhance the effectiveness of disposal and composting methods (Promoting biodegradable and compostable alternatives can support compliance with single-use plastic management policies in Yaounde through several strategies.

As the global community increasingly recognizes the environmental impact of single-use plastics, finding viable alternatives has become a priority. In Yaounde, the capital city of Cameroon, the promotion of biodegradable and compostable alternatives presents an opportunity to align with national and local policies aimed at reducing plastic waste. By strategically implementing these alternatives, Yaounde can work towards sustainable waste management practices while meeting compliance requirements set forth by plastic management policies. This strategic approach not only addresses environmental concerns but also



contributes to the city's commitment to responsible and eco-friendly urban (development & Kim, 2020).

## 7.6 Contraband Plastic: An Anthropological Inquiry



**Photo 90:** Mobile Street Vendor Selling Banned and Conformed Plastics  
**Source:** Mbanam Valentine, 18<sup>th</sup> March 2020

The photo captures a street vendor amidst a display of plastic bags, among which are the banned varieties. This image provides a rich anthropological insight into the intersection of regulatory policies, economic activities, and cultural practices. It offers a visual narrative of how local vendors navigate and negotiate the ban on certain plastic bags within the urban landscape. The presence of banned plastics in the vendor's display reflects the complex dynamics of compliance, economic necessity, and consumer demand. Additionally, it sheds light on the informal economy and how individuals adapt to and resist regulatory changes, offering a window into the lived experiences of those directly impacted by plastic ban policies.

The research on contraband trade between Cameroon and Nigeria provides valuable historical context, but a deeper anthropological exploration reveals the significance of contraband plastics. This seemingly mundane aspect of cross-border exchange has far-reaching cultural, economic, and environmental implications. It reflects the interplay of traditions and modern consumer behaviours, impacts local and regional economies, and contributes to environmental degradation. Understanding these multifaceted implications is crucial for developing effective policies and interventions to address this phenomenon's cultural, economic, and environmental dimensions.

### 7.6.1 From Necessities to Excess: A Shifting Landscape

Cross-border trade traditionally focused on necessities, but the recent inclusion of plastic items disrupts this narrative. Plastics, typically associated with modern convenience, raise questions about their cultural meaning in these communities. They are seen as essential or a sign of excess consumption. Examining attitudes towards these materials helps us understand changing consumer behaviour and the evolving relationship between tradition and modernity within these trade networks. This offers valuable insights into the socio-economic transformation of cross-border trade.

### **7.6.2 Beyond Legality: Unveiling Cultural Meanings**

The research in Yaounde took a fascinating step beyond simply labelling plastic items as "contraband." Delving into the cultural meanings attached to specific types of plastics aimed to paint a richer picture of their significance within the local context (Le Billon & Kajisa, 2022). This approach, moving beyond the surface, enhanced perceptions of these plastics.

It enabled us to understand that specific plastic items were symbols of status, affordability, or access to a desired lifestyle within the community (Ngouo et al., 2023). This is crucial, as cultural understandings and associations with material objects can significantly influence consumption patterns and disposal practices.

Furthermore, fieldwork helped to identify specific cultural significance. The research additionally shed light on certain types of plastics, like bags or bottles which held particular cultural significance within the community. This involved, for example, specific types of plastics like the thicker plastics with labels informing about the ceremony being used in traditional ceremonies or associated with specific social groups. Understanding these nuances is critical for crafting interventions that resonate with local cultural values and avoid unintended consequences.

The research also aimed to lay the groundwork for practical plastic usage and management interventions in Yaounde by uncovering these cultural meanings. This approach, acknowledging the complex interplay between cultural values and material practices, holds immense potential for designing sustainable and culturally sensitive solutions. It can pave the way for interventions that address the environmental concerns surrounding plastic waste, resonate with the community, and encourage responsible consumption and disposal practices.

### **7.6.3 Environmental Concerns and Community Agency**

The results of the research indicate that the problem of plastic waste, particularly in developing countries, is a pressing issue with far-reaching consequences. Regarding contraband

plastics, concerns about their disposal practices and potential contribution to pollution are valid. However, the research offers valuable insights into the complexities surrounding this issue. Fieldwork revealed that communities involved in contraband face limited access to waste management infrastructure and challenging regulations. These challenges extend beyond individual choices and are deeply rooted in structural inequalities. Therefore, addressing the issue of contraband plastics requires a comprehensive approach that considers the complex factors contributing to their presence.

The study found that instead of blaming individuals, it is essential to empower communities for sustainable solutions. Culturally sensitive education played a significant role in raising awareness about the environmental impact of plastics while respecting local values and traditions. Furthermore, fostering community agency in developing sustainable solutions enabled individuals to actively participate in waste management strategies tailored to their contexts. By understanding the complex factors contributing to the presence of contraband plastics and engaging communities as partners in developing solutions, the study moved beyond mere finger-pointing and paved the way for a more sustainable future.

#### **7.6.4 Navigating the Paradox: Collaboration and Innovation**

Contraband plastics in the Cameroon-Nigeria trade reveal a paradox at the heart of this cross-border exchange. On one hand, this practice carries economic benefits for communities, potentially providing access to essential goods and fostering trade relationships. On the other hand, it raises significant environmental concerns, contributing to plastic pollution and jeopardizing the well-being of both communities and ecosystems (Le Billon & Kajisa, 2022; Nguendo-Epanya et al., 2020).

To solve this complex problem, we need a comprehensive approach that goes beyond simple solutions and considers the cultural and economic realities involved. Collaboration is crucial, and we need to bring together different stakeholders, including affected communities, researchers who understand local contexts, policymakers who can enact change, and environmental experts who can effectively address waste management challenges. By working together, we can find effective solutions that consider the complex cultural and economic realities of the situation.

Understanding the cultural context of plastic use within these communities is crucial. Ngouo et al. (2023) highlight the potential influence of modernity and convenience associated with plastics, while Njiforti et al. (2018) emphasize the symbolic meanings attached to specific types of plastic packaging. By delving into these cultural nuances, we can avoid imposing

solutions that clash with deeply held values and instead develop respectful and culturally sensitive strategies.

To reduce the harm to the environment, exploring alternative materials or recycling initiatives is important. Biodegradable alternatives, as suggested by Ngouo et al. (2023), could be functional replacements that minimize long-term harm. Njiforti et al. (2018) also suggest reviving and integrating traditional community-based recycling systems into formal waste management structures, using local knowledge and encouraging resourcefulness. Additionally, collaboration across borders is crucial. Sharing best practices, creating joint waste management initiatives, and promoting open communication between Cameroonian and Nigerian authorities can create a united front against plastic pollution and support sustainable trade practices.

Ultimately, navigating the contraband plastics paradox requires a holistic approach that acknowledges the complex interplay between cultural practices, economic realities, and environmental concerns. Through collaboration, understanding, and innovation, we can pave the way for a future where trade flourishes alongside environmental responsibility, ensuring a sustainable future for communities and ecosystems.

## **CHAPTER EIGHT: CULTURAL ADAPTATIONS: EXPLORING ALTERNATIVES TO PLASTICS**

The chapter overviews the emergence of cultural adaptations in response to changing policies and social norms related to single-use plastics management by delving into the complex landscape of cultural changes in response to evolving policies and social norms regarding single-use plastics management. We explore the interaction between community perspectives on economic and environmental consequences and the development and execution of policies. By examining cultural adaptations, we aim to understand how communities have reacted to changing beliefs about single-use plastics. We also analyze these adaptations' economic and

environmental impacts, revealing their broader significance. Furthermore, we examine policy frameworks and their practical implementations to assess their effectiveness and difficulties in implementing policies for managing single-use plastics.

## **8.1 Cultural Practices and Innovations**

The shift from harmful plastics to eco-friendly alternatives is closely linked to cultural practices and innovations. Local traditions of packaging and storage, which are deeply rooted in the cultural fabric, reflect a history of resourcefulness and sustainability. As banned plastics are being replaced, there is a growing interest in indigenous materials and techniques, making use of the diverse natural resources available in the region. This study offers a glimpse into the evolving cultural adaptations in Yaounde, providing valuable anthropological insights into the social and behavioural aspects of embracing alternative packaging and storage methods.

By centring packaging culture within cultural practices and innovations, Hendershot (2016) prompts us to explore the social and cultural influences that drive our inclination towards excessive packaging. This involves scrutinizing consumer anxieties, societal pressures, and marketing strategies that perpetuate a culture of overabundance and recognizing the diverse meanings and values attached to packaging across different cultures and communities.

Moving beyond a uniform approach to developing culturally relevant solutions, this approach also considers the power dynamics inherent in packaging decisions, from producers to consumers and waste management systems. It addresses concerns about corporate responsibility, social equity, and community empowerment. Embracing packaging culture as a multifaceted social phenomenon, as proposed by Hendershot (2016), enables us to transcend the mere substitution of single-use plastics with alternative materials. It empowers us to confront the deeper societal and cultural drivers behind our disposable mindset within the Yaounde community and to promote a transition towards mindful consumption, responsible packaging choices, and more sustainable ways of engaging with the world around us.

### **8.1.1 Traditional Practices for Packaging and Storing**

Examining how cultural practices and innovations impact the shift away from prohibited plastics provides a nuanced understanding of the societal dynamics involved in Yaounde. For example, ethnographic studies have revealed how traditional weaving techniques using natural fibres such as raffia palm and banana leaves are being revitalized to create bags and containers, offering sustainable alternatives to plastic packaging. These practices demonstrate a cultural

adaptation to the ban and reflect a reconnection with indigenous knowledge and environmental consciousness.

By studying cultural adaptations, we can understand the complex interaction between traditional innovation and environmental sustainability in Yaounde. This holistic perspective shows how cultural values, community practices, and historical knowledge shape the local response to the plastic ban. Yaounde's communities have shown resilience and adaptability by embracing alternative materials and methods, highlighting the importance of cultural agency in driving sustainable change. The anthropological approach also reveals the intricate connections between cultural identity, economic activities, and ecological consciousness, showing the multifaceted nature of the shift towards eco-friendly practices.

#### **8.1.1.1 Lagenaria siceraria**

*Lagenaria siceraria*, commonly called calabash, holds cultural significance for many communities in Yaounde. The Mbororo and Foulfuldé people call a calabash "Gombé". The calabash is an essential object in Mbororo and Foulfuldé culture. It is used for various things, such as removing corn fufu from the pot during cooking because it is a poor conductor of heat, storage, drinking cup, utensils, and decoration. Mbororo and Foulfuldé people also use the calabash to make musical instruments, such as drums and flutes. In some other ethnic groups in Cameroon, the calabash is referred to as "njing" in the Kom language and "ngou" in the Bamiléké language.

Furthermore, the calabash holds a profound cultural significance, particularly among the Foulfuldé community, where it is referred to as "Toumoudé," and the Moudang ethnic group, known as "Galang." Beyond mere utility, the calabash embodies a rich tapestry of tradition and communal identity. Its versatile form finds expression in various cultural practices, serving as a vessel for rituals, social gatherings, and quotidian activities alike. Among the Foulfuldé, the calabash takes center stage in the consumption of "mbal ngaouri," a traditional beverage, while among the Moudang, it is integral to the imbibing of "himchoré," affectionately known as "Bilibili," a local alcoholic concoction. Such rituals not only fulfill practical needs but also reinforce social bonds and affirm cultural heritage, underscoring the enduring significance of the calabash as a conduit for communal cohesion and cultural expression within the Yaounde landscape.

These local names reflect the cultural diversity and linguistic richness of Cameroon, showcasing the significance of the calabash across different ethnic groups within the country. Among Cameroonian communities living in Yaounde, the calabash is symbolic in various cultural and social contexts. For example, within the Bamiléké community, the calabash is often

used in traditional ceremonies and rituals, symbolizing unity, hospitality, and ancestral reverence. During important communal gatherings and celebrations, such as weddings or funerals, the calabash serves palm wine and food, reflecting the values of togetherness and communal sharing within the Bamiléké culture.

Furthermore, the calabash serves as a symbol of continuity and heritage within Cameroonian communities in Yaounde. It is often passed down through generations, carrying with it the ancestors' stories, traditions, and wisdom. In this way, the calabash represents a tangible link to the past and a vessel for preserving cultural identity and ancestral knowledge within the community.



**Photo 91:** The researcher, Drinking “bili-bili” with a calabash in the Briquéterie neighbourhood

**Source:** Mbanam Valentine, 9<sup>th</sup> February 2024

In addition, the calabash is utilized in spiritual and healing practices among some Cameroonian communities in Yaounde. It is usually employed in rituals and ceremonies to seek guidance from ancestral spirits or promote physical and spiritual well-being, said Bouba, a traditional healer in Briquéterie. The use of the calabash in these contexts underscores its symbolic role as a conduit for spiritual connection and healing within the community. In these ways, the symbolism of the calabash among Cameroonian communities in Yaounde reflects its significance in fostering cultural traditions, social cohesion, and spiritual interconnectedness within the community.



Furthermore, the calabash serves as a symbol of community and interconnectedness within many cultures. Its use in communal activities such as food preparation, storage, and sharing underscores its role in fostering social cohesion and unity. The calabash is often utilized in traditional hospitality practices, signifying the values of generosity, togetherness, and mutual support within the community.

Overall, the symbolic nature of the calabash within various ethnic groups reflects its deep-rooted cultural, spiritual, and communal significance. Its multifaceted symbolism underscores its role as a vessel of tradition, spirituality, and social interconnectedness, enriching the cultural heritage of the communities that hold it in high regard compared to plastics. These examples demonstrate how cultural considerations and traditional practices in Yaounde are closely linked to the choice of specific materials for packaging and carrying goods, emphasizing the importance of understanding and respecting these cultural dynamics when introducing alternative materials as a substitute for banned plastics.



**Photo 92:**...Calabash and canarie being sold in a shop at the Briqueterie neighbourhood

**Source:** Mbanam Valentine, 1<sup>st</sup> February 2024



**Photo 93:**...Calabash containing spices for traditional dishes  
**Source:** National Museum, 26<sup>th</sup> March 2024

The calabash seller's statement reveals the diverse cultural significance of calabashes. They serve utilitarian functions in households for storing food and water, are integral to traditional healing practices for mixing and serving medicine, and are also valued as artistic commodities in commercial trade, reflecting the intertwining of local culture's practical, spiritual, and economic aspects.

#### **8.1.1.2 *Raphia Taedigera***

*Raphia taedigera*, also known as raffia palm leaves, holds cultural significance for many communities in Yaounde. The use of raffia palm leaves "ndzeng" in the Ngemba language and "mbong" in the Kom language in weaving traditional bags and baskets holds significant cultural and practical importance in many ethnic groups. Raffia palm leaves are valued for their strength, flexibility, and abundance, making them ideal for crafting various items, including bags and baskets. The significance of raffia palm leaves in weaving traditional bags and baskets can be understood in several ways:

The practice of weaving bags and baskets from raffia palm leaves is an important part of the cultural heritage of ethnic groups in the region. These handcrafted items often have intricate designs and patterns that showcase local artistic traditions and storytelling. They are not only functional but also serve as a form of cultural expression, preserving traditional craftsmanship and passing down cultural knowledge from one generation to the next.

Regarding the sustainable use of natural resources, the use of raffia palm leaves highlights the sustainable utilization of natural resources. Raffia palms are abundant in many parts of the country, including Yaounde, and their leaves can be harvested without causing harm to the trees. By weaving bags and baskets from raffia palm leaves, communities demonstrate a deep respect for the environment and a commitment to sustainable practices, aligning with cultural values of resourcefulness and environmental stewardship.

Concerning the economic and social significance, the production and use of raffia palm leaf bags and baskets also have economic and social significance within communities. They often serve as essential items for trade, gifting, and ceremonial purposes, contributing to local economies and social exchanges. Furthermore, the craftsmanship involved in weaving these items provides opportunities for skill development and entrepreneurship, further enriching the cultural and social fabric of the communities.



**Photo 94:** The process of making a traditional bag “ibami”  
**Source :** Mbah Inonji, 2024

In the photo, a man is seen intricately weaving a traditional bag using fibres from the palm tree. With focused concentration, his hands expertly manipulate the fibers, creating a strong and durable weaving pattern. The vibrant green color of the palm fibers contrasts beautifully with the earthy tones of the finished bag. The man's skilled craftsmanship and dedication to his art are evident in the precise and meticulous way he weaves each strand, showcasing the time-honored tradition of handmade craftsmanship. The photo captures a moment of cultural heritage and artistic skill, preserving the art of weaving with natural materials for future generations to admire.



**Photo 95:** “ibami” A traditional bag made from fibres of raffia palm tree  
**Source :** Mbanam Valentine, 4<sup>th</sup> June 2020

The production of traditional bags using fibres from raffia palm trees in the Grassfield, known as "ibami" in the Meta Clan of the North West Region, holds profound cultural importance. The process typically begins with collecting palm tree fibres, which are obtained from the leaves of the palm tree. These fibres are then carefully extracted and cleaned to remove any impurities. Once cleaned, the fibres are often dried in the sun to prepare them for weaving.

The weaving process involves complex techniques that have been handed down through generations. The fibers are skillfully woven together using traditional methods such as plaiting, coiling, or twining, depending on the bag's specific style. The weaver carefully constructs the bag, paying close attention to its desired size, shape, and pattern.

After the weaving is complete, additional decorative elements, such as colourful dyes, beads, or other embellishments, may be added to the bag to enhance its aesthetic appeal. Making traditional bags with palm tree fibres is a labour-intensive craft that requires expertise and a deep understanding of the materials. It is a practice deeply rooted in the culture and tradition of the people of the Grassfield and reflects the local artisans' skill and artistry.

In the Grassfield Regions of Cameroon, traditional bags made from raffia leaves bags serve as practical carriers for goods and agricultural produce, reflecting the region's agricultural heritage. They are also used in cultural events such as festivals and ceremonies, where they symbolise tradition and are often adorned with symbolic patterns and colours representing the community's identity and values.

The migration of these traditional bags from raffia leaves to Yaounde reflects the interplay of cultural exchange and urbanisation. In Yaounde, these bags serve diverse functions, from carrying goods in local markets to being used as fashion statements by urban dwellers. They also find use in cultural events and ceremonies, bridging the gap between rural traditions

and urban lifestyles and serving as tangible expressions of cultural identity for people from the North West and West Regions living in Yaounde.

### **8.1.1.3 Musa Paradisiaca**

Familiarly referred to as plantain leaves, *Musa paradisiaca* holds both symbolic and practical significance within different ethnic groups in Yaounde. Plantain leaves are revered for their multifaceted uses and symbolic meanings in many cultures. They are often utilised for wrapping and cooking traditional dishes, serving as eco-friendly and biodegradable alternatives to modern packaging materials. Using plantain leaves in culinary practices also reflects cultural values of sustainability, resourcefulness, and a deep connection to the natural environment.

In some ethnic groups in Cameroon, such as the Bamiléké, the use of plantain leaves in traditional cuisine is deeply ingrained in cultural practices and culinary traditions. The leaves are known as "Ndoe" in the Bamiléké language and are widely used for wrapping and steaming various dishes, including "achu" or « Taro » and "egusi pudding". Plantain leaves are utilised as natural wrappers for these dishes, imparting a unique flavour and aroma to the food while also serving as an eco-friendly and biodegradable packaging material.

Furthermore, the use of plantain leaves in various rituals and ceremonies underscores their symbolic importance within Cameroonian cultures. For example, in some communities, plantain leaves are utilised in traditional healing practices and spiritual ceremonies, symbolising purification, protection, and the interconnectedness of the physical and spiritual realms. The Bamiléké ethnic group in Cameroon regards plantain leaves as often integrated into rituals as a symbol of renewal and reverence for the natural world, reflecting the cultural significance of plantain leaves beyond their culinary applications. They utilise plantain leaves in various cultural and spiritual practices, symbolising purification, protection, and the interconnectedness of the physical and spiritual realms. This symbolic use of plantain leaves underscores their importance in traditional rituals and ceremonies within the Bamiléké cultural context.



**Photo 96:** Preservation of Culinary Tradition: Koki and Cooked Cassava Served in Plantain Leaves

**Source:** Mbanam Valentine, 17<sup>th</sup> June 2020

The inhabitants of Yaounde who use plantain leaves in culinary practices such as preparing dishes like "koki", "egusi pudding", and "ekomba" express a deep appreciation for the traditional and natural aspects of these cooking methods. They emphasize the unique flavour and aroma that the plantain leaves impart to these dishes, attributing a sense of authenticity and cultural connection to their culinary experiences. Some express a sense of pride in preserving and continuing the culinary traditions of their heritage, viewing the use of plantain leaves as a way to honour their cultural roots and maintain a link to their ancestral culinary practices.

Conversely, others view using plantain leaves as a practical and sustainable choice in their cooking. They highlight the eco-friendly nature of using plantain leaves as a biodegradable and renewable alternative to modern cooking materials, aligning with a desire to reduce their environmental impact. Additionally, they appreciate the aesthetic appeal that plantain leaves bring to their dishes, adding a natural and rustic charm to their culinary creations. Overall, urban dwellers in Yaounde who utilize plantain leaves in their culinary practices express a blend of cultural pride, environmental consciousness, and a deep connection to traditional cooking methods.

#### **8.1.1.4 Thaumatooccus Daniellii Leaf**

The Marantaceae Leaf, particularly the *Thaumatooccus Daniellii*, commonly called the "prayer plant" leaf, carries cultural significance for numerous communities in Yaounde. It is also known by other names such as the "kouakoko leaf", "bush ngongo leaf", "bush planty leaf", or "mfubon" in Bangangté.

The African Marantaceae leaf has unique and vibrant patterns with green, red, and purple colors (Smith, 2020). These leaves are highly valued for their beauty and often have striking designs and delicate patterns. They are also known for their distinctive behaviour of folding upward in the evening and unfurling again in the morning (Jones, 2018), adding an enchanting quality to botanical displays.





**Photo 97:** “fufu-corn” wrapped with prayer leaves  
**Source :** Mbanam Valentine, 18<sup>th</sup> April 2022

This leaf holds significant cultural importance when wrapping food in various communities. The leaves of this plant are valued for their natural sweetening properties, which can subtly enhance the flavour of the food they envelop. This traditional food preservation and flavour enhancement method reflects the deep cultural connection to the natural environment and the resourcefulness of indigenous culinary practices. Furthermore, incorporating this leaf into food preparation highlights the delicate balance between cultural traditions, culinary arts, and the sustainable use of local plant life, emphasizing the deep connection between food, culture, and the environment.

#### **8.1.1.5 Woven Baskets**

Woven baskets are made in various regions across Cameroon, reflecting the diverse cultural and artistic traditions of different ethnic groups. Some areas known for producing woven baskets include the Grassfields region, which encompasses areas inhabited by the Bamiléké, Bamum, and other ethnic groups. Additionally, the North West region of Cameroon is known for its rich tradition of basket weaving. These regions are home to skilled artisans who craft various baskets using traditional techniques and locally sourced materials. The production of woven baskets in these areas serves practical purposes and holds cultural and symbolic significance within the communities. Woven baskets hold significant symbolic importance in Yaounde and are utilized for various purposes and occasions.

Symbolically, these baskets represent tradition, craftsmanship, and community interconnectedness. They embody the region's cultural heritage and reflect local artisans' skill and artistry. In Yaounde, woven baskets are used for carrying and storing goods, such as

agricultural produce, crafts, and personal belongings. They serve as practical and durable containers that align with traditional practices of utilizing natural materials for everyday needs. Additionally, woven baskets are often employed in ceremonial events, including weddings, festivals, and communal gatherings, where they symbolize cultural identity, unity, and the sharing of resources within the community. Their use in these occasions underscores their social and symbolic significance as vessels that connect individuals and communities through shared traditions and values.

The Beti community in Yaounde also engages in weaving baskets, utilizing traditional techniques and locally sourced materials to create functional and durable containers. These woven baskets are often used for farming as practical tools for carrying and storing agricultural produce, such as cassava, cocoyams, fruits, vegetables, and grains. Within the Beti community, basket weaving holds cultural significance and reflects the community's connection to the land and agricultural traditions. The use of woven baskets in farming underscores their practical utility and role in preserving cultural heritage within the Beti community in Yaounde.

The availability and accessibility of alternative materials significantly shape the population's perception and adoption of these options. For instance, individuals may be more inclined to use reusable cloth bags or nonbiodegradable thicker plastic bags as alternatives in local markets and stores. Conversely, alternative materials' availability and higher costs hinder their widespread adoption.



**Photo 98:** The manufacturing process of weaving a basket  
**Source:** Fongoh Ayeh, 12<sup>th</sup> March 2024





**Photo 99:** “ifetih koubrou” Meta short round hand-woven basket with a cover  
**Source:** Mbanam Valentine, 6<sup>th</sup> June 2020

In the "Meta Clan" of Cameroon's North West region, woven baskets are made using natural materials like grasses, reeds, and bamboo. These materials are chosen for their strength, flexibility, and availability. The specific material used can vary based on the artisan's preference, the basket's intended use, and the community's traditional practices. The materials are prepared, dyed, and woven into intricate patterns to create unique and culturally significant "Meta Clan" baskets. The process of making these baskets typically involves several steps.

First, the artisan selects the material to be used, including reeds, grasses, or other natural fibres. These materials are cleaned, soaked, and sometimes dyed to achieve the desired colour. Next, the artisan prepares the material by cutting it into uniform strips or lengths. These strips are then woven together using various techniques, such as coiling, plaiting, or twining, depending on the basket's style.

As the weaving progresses, the artisan shapes the basket by manipulating the material and adding or reducing the number of strips to achieve the desired form. This process requires skill and attention to detail to ensure the basket maintains its structural integrity while achieving the intended design. Finally, once the weaving is complete, the artisan may add finishing touches, such as decorative elements or a protective coating, to enhance the appearance and durability of the basket.

Overall, making a woven basket is a labour-intensive craft requiring patience, skill, and a deep understanding of the materials used. Each step is crucial in creating a functional and aesthetically pleasing piece of art. It is worth mentioning that, in the Meta clan, not all families

are traditionally inclined to make woven baskets. Instead, this craft is often passed down from generation to generation within specific families with a basket-weaving tradition. This means that the knowledge, techniques, and cultural significance of basket weaving are preserved and transmitted within these particular lineages, contributing to preserving the craft's unique traditions and styles within the clan.

The migration of these woven baskets from the North West Region to Yaounde signifies the movement of cultural practices and artefacts from rural to urban settings. In Yaounde, these baskets hold cultural significance for the migrated urban population, serving as tangible connections to their rural heritage and representing a sense of continuity and identity in the urban landscape.

In Yaounde, these baskets serve multiple functions across different distinct cultures. They are used for carrying goods in local markets, as decorative items in homes, and as symbols of cultural pride during traditional ceremonies and events. Among different cultural groups in Yaounde, these baskets may also take on specific symbolic meanings and patterns, reflecting the diversity of cultural expressions within the urban setting.

### **8.1.2 Contemporary Alternatives**

The ubiquitous presence of single-use plastics has created various environmental and health challenges, creating a complex and pressing issue. However, within this landscape of concern, a rich array of inventive alternatives is starting to unfold, propelled by the interplay of cultural practices, indigenous knowledge, and an escalating demand for sustainability. This confluence of factors has set the stage for a dynamic and multifaceted transformation, where traditional wisdom and contemporary imperatives intersect, giving rise to a burgeoning array of solutions that seek to address the pervasive impact of single-use plastics while honouring the rich cultural heritage and environmental consciousness of the region.

#### **8.1.2.1 Traditional Wisdom, Modern Application**

In the vibrant markets of Yaounde, a rich tapestry of tradition intertwines with the pulse of modern commerce, where the age-old reliance on traditional packaging materials such as woven baskets and banana leaves has been a cornerstone of local trade for generations (Akpan & Ekanem, 2020). These biodegradable marvels offer a tantalizing glimpse into a sustainable future, yet the constraints of scale and hygiene hamper their widespread adoption. Nevertheless, a glimmer of hope emerges on the horizon as initiatives like "Retour au panier" in Douala champion the art of basket weaving and fervently advocate for the resurgence of these time-

honoured solutions, signalling a potential renaissance of these eco-conscious practices that have stood the test of time (Ndam & Ngwa, 2023).

### **8.1.2.2 Compostable Plant-Based Options**

In sustainable innovation, a captivating saga unfolds as biodegradable materials derived from the very essence of nature emerge as harbingers of promise and possibility. Enter the stage, cassava-based plastics, a marvel crafted by visionary companies such as Greenplast Cameroon, offering a tantalizing solution that holds particular allure for the realm of food packaging, igniting a symphony of excitement and anticipation that reverberates through the corridors of sustainability (Kouassi & Kouadio, 2022). Furthermore, the spotlight dances upon the enthralling realm of edible coatings derived from the very heart of cassava starch, where pioneering research unveils a world of thrilling potential for the preservation of fruits and vegetables, painting a vivid tapestry of innovation and possibility that promises to reshape the very essence of our relationship with the natural world (Mbouda et al., 2022).

### **8.1.2.3 Stainless-steel: Durability and Style**

In beverage packaging, a thrilling narrative unfolds as the allure of reusable stainless steel bottles surges to the forefront of popular consciousness. Despite their initial costliness, the resounding chorus of their durability and the resolute eradication of plastic waste heralds a symphony of long-term cost savings and environmental triumph, igniting a fervent wave of enthusiasm and anticipation. Moreover, the tantalizing prospect of locally produced options stands poised to elevate their allure and accessibility, painting a vivid tapestry of innovation and sustainability that promises to reshape the very essence of our relationship with beverage packaging.

In Yaounde's celebratory dining and cultural festivities, there is a call for change, a call for something more enduring and sustainable. Imagine the glint of stainless-steel plates adorning the tables, a symbol of both elegance and environmental responsibility. While this shift may initially seem unfamiliar, the promise of lasting quality and the removal of single-use plastic plates bring a sense of triumph and cultural preservation. The idea of locally crafted stainless-steel plates adds a touch of pride and accessibility, painting a picture of innovation and sustainability that promises to redefine how we approach celebratory dining and cultural traditions, ushering in a new era of conscientious elegance and environmental stewardship.



**Photo 100:** A stainless-steel plate  
**Source:** Mbanam Valentine, 13<sup>th</sup> January 2024

#### 8.1.2.4 Paper Alternatives: Exploring the Trade-Offs

In the exciting world of sustainable packaging, the use of paper bags as an alternative reveals a complex story of responsibility and complexity. Responsible sourcing and ensuring biodegradability are crucial elements in this story, highlighting the delicate balance between environmental stewardship and packaging innovation. Additionally, there is a growing demand for a comprehensive lifecycle assessment to truly understand the sustainability of paper production and its environmental impacts. This inquiry promises to reshape our relationship with packaging materials and their ecological footprint.



**Photo 101:** Paper option used to package medicine  
**Source:** Mbanam Valentine, 12<sup>th</sup> January 2024

#### 8.1.2.5 Cloth bags

In Yaounde's markets, plastic bags disrupt traditional practices of using woven baskets and cloth to carry goods. This can be seen and understood as a clash between progress and cultural identity. However, a fascinating adaptation is occurring with the rise of cloth bags. These bags, crafted by women with traditional "pagne" designs and modern motifs, represent a "hybridization" of tradition and modernity. They are not just a replacement but a statement of cultural agency and environmental consciousness. Challenges exist, but the cloth bag's potential is undeniable. It weaves a sustainability narrative, offering valuable lessons for communities seeking alternatives to plastic while preserving their cultural identity. Yaounde stands at a crossroads in its battle against SuP pollution. While the challenge is significant, emerging alternatives offer hope for a more sustainable future. By embracing traditional knowledge, fostering innovation, and prioritizing community engagement, Yaounde can pave the way for a greener future for itself and the broader African continent.



**Photo 102:** A cloth bag from the University of Bristol in the UK brought to Yaounde for a workshop

**Source:** Mbanam Valentine, 26<sup>th</sup> October 2023

### **8.1.3 Indigenous Materials and Techniques for Substitute Products**

In Yaounde, indigenous materials and techniques are being harnessed to replace plasticware, reflecting a cultural shift towards sustainable alternatives. For instance, artisans use traditional weaving methods and locally sourced fibres such as raffia palm, plantain, or banana leaves to create eco-friendly bags and containers. These indigenous techniques offer a biodegradable and aesthetically appealing substitute for plastic bags and contribute to the preservation of traditional craftsmanship and cultural heritage.

Furthermore, calabashes and woven baskets, deeply rooted in Cameroonian culture, are being repurposed for food storage and transportation, serving as natural substitutes for plastic containers. This adaptation aligns with local customs and showcases indigenous materials' resourcefulness in addressing contemporary environmental challenges. By integrating these

traditional storage methods into everyday practices, Yaounde's residents embrace a sustainable approach that resonates with their cultural identity and values.

Moreover, using plant-based materials like banana leaves and bamboo for packaging and storage exemplifies the ingenuity of indigenous resources in providing alternatives to plastic. These materials, readily available in the local environment, are being transformed into versatile and biodegradable packaging solutions, demonstrating the adaptability of indigenous techniques to meet modern needs. This shift towards indigenous substitutes reduces reliance on plastic and fosters a deeper connection to the natural world, emphasizing the interplay between cultural practices and environmental sustainability in Yaounde.

#### **8.1.4 Ethnographic Studies on Cultural Adaptations**

Ethnographic research in Yaounde to study cultural adaptations about single-use plastics provides valuable insights into how local communities address the environmental and cultural issues caused by plastic waste aligned with policies. One possibility for investigation is how traditional food storage and packaging methods have adjusted to the prevalence of single-use plastics. Observing the use of traditional materials like plantain leaves or woven baskets as alternatives to plastic packaging in local markets and households will be part of this research.

Another area of focus for ethnographic research was the cultural attitudes and behaviours surrounding the use and disposal of single-use plastics in Yaounde. This involved studying how social norms and practices influence the consumption and disposal of plastic products, as well as the rise of grassroots movements or community initiatives aimed at reducing plastic waste.

This statement refers to a comprehensive study that delves into the impact of social norms and practices on the usage and disposal of plastic products and the emergence of grassroots movements or community initiatives focused on mitigating plastic waste. The study likely involved an in-depth exploration of how societal behaviours, beliefs, and customs shape the patterns of plastic consumption and disposal in Yaounde. This encompasses understanding the cultural attitudes towards single-use plastics, recycling habits, repurposing, and the influence of social norms on individual choices related to plastic usage and waste management.

Furthermore, the study likely examined the growing trend of grassroots movements and community-driven initiatives that aim to address the issue of plastic waste. This involved an analysis of the motivations behind these initiatives, the strategies employed to raise awareness and effect change, and the impact of such efforts on local communities. By focusing on these

grassroots movements, the study has sought to understand how local communities are mobilizing to tackle plastic waste, their challenges, and the potential for these initiatives to bring about meaningful shifts in attitudes and behaviours towards plastic consumption and disposal. Overall, the study aimed to provide a nuanced understanding of the complex interplay between social norms, plastic consumption, waste disposal, and the rise of community-led efforts to combat plastic pollution.

## **8.2 Community Perspective and Acceptance**

The shared perspective and acceptance of alternatives to SuPs in Yaounde are crucial factors in successfully implementing sustainable practices. For instance, ethnographic studies explored how local communities perceive and adopt alternative materials such as biodegradable packaging or reusable containers.

Furthermore, we also investigated the role of environmental association leaders, local businesses, and plastic recycling firms like Namé Recycling and SOFAMAC in driving the adoption of alternatives to banned plastics. This involved studying how these stakeholders influence community perceptions through education, advocacy, and promoting sustainable practices. As an illustration, Namé Recycling consistently coordinates community-driven endeavours, including collecting plastic waste from dumping sites and waterways, to promote recycling initiatives.

### **8.2.1 Public Perception and Alternative Material**

The public perception of alternative materials is a crucial aspect that influences the success of such initiatives. Several vital points about public perception are worth considering: Firstly, cultural attitudes and traditions significantly shape public perception. Understanding the cultural significance of certain materials and their historical use in the community is essential for introducing alternative options that resonate with local values and practices. For example, woven baskets or plantain leaves hold cultural significance and are more readily accepted as alternatives to plastic due to their traditional use in the region.

Secondly, the economic aspect is vital. The affordability and availability of alternative materials greatly influence public perception. If sustainable alternatives are economically viable and accessible to the general population, they are more likely to be embraced. Local production and sourcing of alternative materials can also contribute to the community's economic development. In Yaounde, though expensive, the inhabitants of Yaounde are beginning to

comply; the shift in behaviour is challenging to accept because they have been used to buying goods and benefiting from free packaging.

Additionally, education and awareness campaigns are crucial for shaping public perception. Informing the public about the environmental impact of plastic and the benefits of sustainable alternatives can lead to a shift in attitudes (Costa Kasie, 2020). Highlighting the reusability, durability, and eco-friendliness of alternative materials has helped garner public support and encourage the adoption of these options. Interviewees complained that the authorities could have communicated more about new alternatives to light plastic bags. This situation sparked scepticism about the feasibility of implementing the plastic ban.

Lastly, the convenience and practicality of alternative materials are important considerations. Some sustainable alternatives are as convenient and functional as plastic or even offer additional benefits, which is why the public quickly embraces them, like paper bags that are not transparent like lightweight plastics. Demonstrating these alternatives' practicality and ease of use has helped overcome initial resistance and foster a positive perception among the population. Particular residents of Yaounde voiced their discontent with adopting alternative measures following the prohibition, mainly when the punitive actions were vigorously enforced.

Brenda Mendouga, a housewife in Ekounou, Yaounde IV Council, responded, "When we arrive at the fish shop, for example, they charge 50 XAF for packaging. We buy it to wrap our fish. Otherwise, we pack them in cardboard, and it is not comfortable" Anette Ayuck, a housemaid responded. "We cannot find biodegradable plastics in the market; we just cannot find them; they are scarce". Annette Ayuk also claimed the current situation is not favourable for those living below the poverty line. She became nostalgic about the past where they used lightweight plastics for packaging free of charge.

### **8.2.2 Social and Cultural Factors Influencing Adoption**

Various social and cultural factors influence the adoption of alternatives to banned plastics. For example, the cultural value placed on sustainability and environmental stewardship significantly shapes attitudes towards plastic alternatives. Traditional practices of using natural materials for packaging and carrying goods, such as woven baskets or plantain leaves, reflect a cultural ethos of resourcefulness and respect for the environment. This cultural heritage can influence the acceptance of alternative materials that align with these values.



Furthermore, social norms and community practices contribute to adopting plastic alternatives. For instance, using reusable cloth bags for shopping influences social networks and community behaviours. In cases where a significant portion of the community embraced these cloth bags, it created social pressure and a sense of collective responsibility towards reducing plastic waste. Additionally, community-led initiatives and awareness campaigns that promote alternative materials further influence social norms and behaviours, though these were short-lived. These campaigns were frequently organized during the period the ban was passed but slowed down significantly.

Moreover, economic factors also play a role in Yaounde's adoption of plastic alternatives. The availability and affordability of alternative materials, such as nonbiodegradable bags or reusable containers, significantly impact their adoption. For example, locally produced eco-friendly packaging options that are more accessible and competitively priced encouraged their uptake among businesses and consumers. Additionally, the influence of market forces and consumer demand can drive the availability and diversity of plastic alternatives in Yaounde.

In summary, adopting alternatives to banned plastics and other single-use plastics in Yaounde is influenced by a complex interplay of social, cultural, and economic factors. Understanding these dynamics is crucial for promoting the widespread acceptance and integration of sustainable alternatives within the local community.

### **8.2.3 Case Studies of Successful Cultural Adaptations**

In the lively city of Yaounde, a rich mix of cultures shapes the everyday experiences of its people. The communities here are incredibly resourceful and creative as they navigate the challenges of modern life while preserving their cultural traditions. A great example is how they use traditional materials for storing and packaging, providing an eco-friendly alternative to single-use plastics. This has led to a closer look at how well these cultural traditions have adapted, blending old practices and materials with city life and teaching us important lessons about tradition and modern life in this dynamic place.

#### **8.2.3.1 Traditional Practices in Modern Context**

In Yaounde, it is interesting to see how traditional ways of doing things have found their place alongside modern life. Take the beautifully woven baskets made the traditional way with natural fibres. They have become a sustainable alternative to plastic bags for shopping and

storing things in the city. These baskets, decorated with patterns that have cultural meaning, are not just practical – they also keep the traditional craftsmanship skills alive in today's world. Then, plantain leaves are used for wrapping and packaging food, such as the famous dish "fufu corn." It is an excellent example of how traditional materials still play an essential role in the city. This comparison helps us understand how these old practices have adapted and thrived in Yaounde, showing us how tradition and modern life work together in this diverse and vibrant place.

### **8.2.3.2 Preserving Cultural Heritage**

Preserving cultural heritage requires a delicate balance between maintaining tradition and meeting the needs of modern urban life. One approach is to revive traditional crafts, such as making intricately designed bags using fibers from raffia palm trees. Artisans in Yaounde have adopted new marketing strategies and partnerships to promote these traditional crafts, ensuring their continued relevance and economic viability.

According to some researchers, there are concerns regarding preserving this traditional art. If preservation is prioritized, the baskets may remain within the next two to three decades despite their enduring significance in rituals and healing. Consequently, future generations might lose all knowledge of these culturally significant items (Tikere, 2022). This raises concerns when considering the encroachment of modern alternatives to packaging in Yaounde, underscoring the imperative to impart this craft to future generations.

Furthermore, community-led initiatives aimed at transmitting the knowledge of weaving and crafting these traditional items to younger generations have played a pivotal role in safeguarding this facet of cultural heritage. The results of these endeavours are evident in the flourishing market for these traditional products, both domestically and internationally, demonstrating the successful preservation of cultural heritage in the face of modernization.

### **8.2.3.3 Sustainable Transitions**

In Yaounde, the move towards sustainability is rooted in the wisdom gained from effectively blending traditional practices with modern ways. For example, the switch from using lightweight plastic for packaging to using calabash, a traditional gourd, for serving and storing corn pap, primarily when the ban on plastic was strongly enforced in Yaounde, shows a sustainable change deeply connected to cultural practices. This adjustment fits with eco-friendly principles and shows the preservation of traditional knowledge and the promotion of sustainable living. Furthermore, the insights from successful adjustments are apparent in using

raffia palm leaves and bamboo in modern construction methods, providing sustainable alternatives to contemporary building materials. These changes highlight the lessons learned from successful adaptations, stressing the significance of preserving cultural practices while embracing sustainable solutions in a rapidly changing urban environment.

#### **8.2.3.4 Cultural Evolution**

The City of Yaounde provides compelling examples of cultural evolution, where successful adaptations in various contexts demonstrate the dynamic interplay between tradition and modernity. One such example is the integration of traditional woven baskets into urban retail practices, preserving cultural heritage and meeting the contemporary demand for sustainable and aesthetically pleasing packaging.

Sustainable transitions in Yaounde reflect the harmonious blend of cultural authenticity and modern culinary practices. For instance, the adaptation of plantain leaves for wrapping and presenting traditional dishes like "achu" and "miondo" represents a sustainable shift deeply rooted in cultural practices. This adaptation aligns with eco-friendly principles and embodies the preservation of traditional knowledge and the promotion of sustainable living. Additionally, incorporating raffia palm leaves and bamboo into contemporary art and craft industries demonstrates the successful evolution of traditional materials into diverse creative expressions, contributing to the cultural vibrancy of Yaounde. These case studies illuminate the multifaceted nature of cultural evolution, where traditional adaptations thrive in diverse urban contexts, enriching the city's cultural tapestry.

#### **8.2.3.5 Innovation and Tradition**

In Yaounde, a compelling case study that exemplifies innovation and tradition is the resurgence of traditional weaving techniques in creating contemporary fashion and accessories. Artisans have innovatively integrated traditional weaving methods, often using raffia palm fibres, into the production of modern clothing, handbags, and accessories. This adjustment safeguards traditional skills and gives them a modern, up-to-date attractiveness that appeals to local and global markets. The effective blending of innovation and tradition in this example showcases how cultural practices can adapt to modern settings, enhancing the liveliness of Yaounde's culture and economy.

#### **8.2.3.6 Cultural Continuity in a Changing World**

Santa Lucia, a well-known supermarket with many branches spread across Yaounde, produces thicker plastic bags labelled with the supermarket's brand, which could be seen as a

case study in cultural adaptation. By ensuring the durability and reusability of these bags, the supermarket positions them as a sustainable choice that aligns with local cultural practices of resourcefulness and longevity. Through effective branding and messaging that resonates with the community's values, the supermarket has successfully integrated these thicker plastic bags into the local culture, promoting reuse and reducing overall plastic waste in Yaounde. Similarly, pharmacies have adopted this packaging pattern where drugs are packaged in thicker plastics to encourage reuse.

Another successful case study uses paper bags as a substitute for single-use plastic bags. By promoting the use of paper bags, several businesses emphasize the environmental benefits of this alternative while aligning with cultural values of sustainability and eco-consciousness. Through community engagement and educational campaigns, they highlight the cultural significance of embracing eco-friendly packaging options, thereby fostering a shift in consumer behaviour and promoting the acceptance of paper bags as a viable alternative to plastic. In smaller-scale businesses, newspapers and pages of books are used for packaging as an alternative to plastic bags.

Fieldwork also uncovered successful initiatives and practices in Yaounde. One potential case study involved the use of traditional woven baskets in daily shopping practices. Local initiatives promote the use of intricately crafted baskets made from natural materials as an alternative to plastic bags, emphasizing the cultural significance of these traditional items while addressing the need for sustainable packaging. This approach aligns with the cultural heritage of the region and government policies and could potentially lead to successful cultural adaptations to reduce reliance on single-use plastics.

Another case study focuses on community-led efforts to revive the use of plantain leaves or other natural materials for packaging and carrying goods in Yaounde. By highlighting the environmental benefits and cultural relevance of these traditional practices, such initiatives have promoted the adoption of eco-friendly alternatives to plastic packaging. This approach leverages existing cultural knowledge and practices to drive successful adaptations in reducing plastic waste.

Furthermore, successful case studies have emerged from collaborations between local artisans, businesses, and environmental organizations to develop and promote sustainable packaging solutions rooted in traditional craftsmanship. For instance, initiatives that support the production and use of reusable cloth bags inspired by local textile traditions have

contributed to successful cultural adaptations to reduce the reliance on single-use plastics in Yaounde.

Although specific case studies may not be extensively recorded, these instances demonstrate potential avenues for successful cultural adaptations to substitute single-use plastics and plastic bags in Yaounde by utilizing traditional practices and engaging with the community. By customizing initiatives to Yaounde's cultural context and building upon existing cultural practices, it becomes feasible to create effective strategies for advocating sustainable alternatives and nurturing cultural adaptations within the city.

### **8.2.3.7 Transcultural Experience**

The transcultural experience case study provides a fascinating look at how different cultures in this diverse urban environment have adapted to replace single-use plastics. This study delves into the rich mix of cultures, where various ethnic groups come together, creating a dynamic blend of traditions, languages, and practices. How ethnic diversity is handled in this setting is crucial in shaping how sustainable practices are embraced and how the move away from single-use plastics is taking place.

Adopting "Ghana Must Go" bags, traditionally made from the durable and colourful "Aso-Oke" fabric, represents a successful experience from migration from Nigeria. This handwoven textile, traditionally created by the Yoruba people, showcases vibrant patterns that reflect the region's cultural heritage and artistic traditions (Okudzeto, 2022).

The "Ghana Must Go" bag, a woven nylon tote with a checkered pattern and zipper, is widely used for storage, as luggage, grocery shopping, and picnics due to its durability, spaciousness, and affordability. Despite its controversial history related to the expulsion of undocumented West African migrants from Nigeria in the 1980s, it has become a symbol of cultural identity and resourcefulness across Africa (Okudzeto, 2022).

Similarly, in Yaounde, the woven polypropylene bags, known as "sac Baco" in French and "Sacks and Motor" in English, are made of fine interwoven strips of polypropylene, known for their strength, durability, breathability, and cost-effectiveness. These bags are widely used for storing agricultural products such as grains, legumes, seeds, and sugar, as well as various other products, including sand, fodder, chemicals, cement, and metal parts.

To illustrate a successful case study, we would like to share the story of Mrs. Ngo, a housewife living in Yaounde. Her experience exemplifies the successful use of woven polypropylene bags daily. Mrs Ngo, like many others in her neighbourhood, relies on these

durable and versatile bags for various purposes. She uses them as her main shopping bag and for storing grains, legumes, seeds, and other items, benefiting from their resilience and breathability, which help preserve the freshness of these agricultural products.

Additionally, Mrs. Ngo repurposes these bags to store other items such as sand, chemicals, and metal parts, showcasing the bags' adaptability to diverse needs. Through her experience, we witness the effective integration of woven polypropylene bags into the fabric of everyday life in Yaounde, reflecting their significance in meeting agricultural and non-agricultural goods' storage and packaging requirements within the community.

#### **8.2.4 Challenges and Limitations in Cultural Adaptations**

Delving into the challenges and limitations of adapting traditional materials and practices to contemporary contexts involves exploring several vital factors. Firstly, it necessitates examining shifting consumer preferences, which can significantly impact the demand for traditional cultural products such as woven baskets, plantain leaves, raffia palm trees, calabash, and bamboo. Understanding how societal changes and evolving consumer tastes influence these traditional materials' perceived value and utility is crucial in assessing their continued relevance in modern contexts.

##### **8.2.4.1 Sustainability and Environmental Impact**

We had the chance to thoroughly examine the difficulties and limitations linked to the responsible use of materials like plantain leaves, raffia palm trees, calabash, and bamboo. By exploring this area, we can deeply examine overharvesting, deforestation, and the broader ecological impacts of using these natural resources in cultural practices. This exploration is crucial for understanding the potential environmental effects of traditional material use and for creating strategies to ensure the sustainable management of these resources within their cultural contexts.

Excessive harvesting of natural resources, such as raffia palm trees and bamboo, can lead to the depletion of these valuable plants, disturbing local ecosystems and posing a threat to biodiversity. Additionally, the extensive use of plantain leaves and calabash without proper management can contribute to deforestation and habitat loss, upsetting the delicate balance of local flora and fauna. These practices can also result in broader ecological implications, including soil erosion, loss of wildlife habitats, and disruption of natural water cycles.

Understanding these environmental challenges is crucial for creating strategies to ensure the sustainable management of these resources within their cultural contexts. This involves

implementing measures such as controlled harvesting, reforestation efforts, and promoting alternative materials or sustainable harvesting techniques. By integrating ecological considerations into cultural practices, communities can work towards preserving their traditional materials while safeguarding the natural environment for future generations.

#### **8.2.4.2 Economic Viability and Livelihoods**

This research presents an opportunity to explore the economic difficulties and constraints experienced by communities that rely on materials such as plantain leaves, raffia palm trees, calabash, and bamboo. By focusing on this area, we can investigate essential issues such as fluctuating market demand, income generation, and the impact of modernization on traditional livelihoods associated with these materials. Due to fluctuating market demand, communities that depend on these traditional materials face a significant challenge. Changes in consumer preferences, market trends, and global economic dynamics can lead to unpredictable shifts in the demand for products made from these materials, affecting the livelihoods of artisans and local producers.

Additionally, the economic viability of traditional materials is influenced by factors such as access to markets, pricing mechanisms, and competition from modern alternatives, all of which can affect the income generation potential of communities engaged in producing and selling these materials. These challenges highlight the need for a deeper understanding of the economic dynamics surrounding the use of traditional materials and the potential strategies that can be implemented to ensure their sustainable management and continued use within the cultural contexts of the communities that depend on them.

Furthermore, the influence of modernization on traditional livelihoods associated with these materials is a critical consideration. As communities experience social and economic transformations, traditional practices and occupations struggle to adapt to modern market dynamics and technological progress. This could result in a decline in the traditional knowledge and skills related to working with these materials, potentially impacting the economic sustainability of these cultural practices.

Understanding the economic challenges and limitations communities that rely on traditional materials face is crucial for developing strategies to support their economic resilience. This involves initiatives aimed at market diversification, skill development, and promoting traditional crafts in domestic and international markets. Addressing these economic factors makes it possible to foster the economic sustainability of traditional material-based livelihoods and support the well-being of the communities involved.

### **8.2.4.3 Cultural Preservation and Transmission**

Investigating the difficulties associated with preserving traditional knowledge and skills linked to using woven baskets, plantain leaves, raffia palm trees, calabash, and bamboo provides a foundation for exploring how cultural adaptation impacts the passing of traditional craftsmanship and indigenous knowledge to future generations. Preserving traditional knowledge and skills is crucial for maintaining communities' cultural heritage and identity. However, the rapid pace of societal change and the influence of external factors pose significant challenges to the intergenerational transmission of these skills and knowledge. As younger generations become increasingly exposed to modern lifestyles and alternative career paths, there is a risk of traditional craftsmanship and indigenous knowledge being marginalized or lost. Efforts to revitalize and preserve indigenous languages and cultures face obstacles such as limited resources, a lack of qualified teachers, and the utilization of technology.

By actively engaging with indigenous communities, promoting their voices, and embracing technological advancements, we can ensure that indigenous cultures continue to thrive, evolve, and contribute to the rich tapestry of human diversity. The preservation of indigenous languages, art, and traditional practices can be supported through technology, such as digital archives and online platforms. Understanding the economic challenges and limitations faced by communities that rely on traditional materials is crucial for developing strategies to support their economic resilience. This involves initiatives aimed at market diversification, skill development, and promoting traditional crafts in domestic and international markets. Addressing these economic factors makes it possible to foster the economic sustainability of traditional material-based livelihoods and support the well-being of the communities involved.

Adapting traditional materials and practices to contemporary contexts involves exploring several vital factors, including shifting consumer preferences, which can significantly impact the demand for traditional cultural products such as woven baskets, plantain leaves, raffia palm trees, calabash, and bamboo. Understanding how societal changes and evolving consumer tastes influence these traditional materials' perceived value and utility is crucial in assessing their continued relevance in modern contexts. This information was obtained from a study on urban development interventions and living conditions in informal settlements in Yaounde. The socio-ecological dynamics of urban systems, including the interplay between social and environmental features, have essential implications for human-nature interactions in urban environments. Understanding the factors that affect cultural ecosystem services in urban areas is crucial for promoting sustainable urban development. The historical, social, and



environmental dynamics of urbanization are complex and multifaceted and require a comprehensive approach to study and address. Urban landscapes are heterogeneous and provide a compelling study system to understand the interplay between social and ecological networks.

Furthermore, understanding the complex challenges of dealing with competition from modern alternatives requires a comprehensive examination of how mass-produced, synthetic, or imported alternatives pose a significant challenge to traditional materials and practices. The availability and low cost of modern substitutes, combined with aggressive marketing strategies, can greatly undermine the market for traditional cultural products. This, in turn, directly affects the livelihoods of artisans and the communities that rely on these materials. The economic implications of this shift can be substantial, affecting not only the financial stability of artisans but also the cultural significance and continuity of traditional practices associated with these materials.

Furthermore, the need for innovation to maintain the relevance of these cultural adaptations is a central aspect of cultural preservation and transmission. It involves exploring how traditional practices can be innovatively adapted to meet contemporary needs and preferences without compromising their cultural integrity. This may encompass efforts to enhance the functionality, aesthetic appeal, and versatility of traditional materials and develop new products that resonate with modern sensibilities while retaining cultural authenticity.

For example, when discussing the enhancement of traditional materials, such as woven baskets, traditional bags, and calabash, artisans might explore incorporating modern design elements while retaining traditional weaving techniques. This could create pieces that are not only culturally authentic but also appeal to contemporary tastes. Developing woven baskets with modular designs to suit modern storage needs could also enhance their functionality and appeal to a broader audience.

Incorporating modern design elements into traditional materials, such as woven baskets, traditional bags, and calabash, can be achieved through various innovative approaches. For woven baskets, artisans combine traditional techniques with modern design elements, creating culturally authentic pieces that appeal to contemporary tastes. This could involve using sustainable and durable materials, such as recycled materials, to create eco-friendly yet stylish bags.

Developing woven baskets with modular designs to suit modern storage needs could also enhance their functionality and appeal to a broader audience. For calabash, artisans might explore new techniques for carving and decorating these gourds to create contemporary home

decor items or fashionable accessories. By infusing modern design concepts with traditional craftsmanship, they can produce calabash products that resonate with modern consumers while honouring the cultural heritage of the material. In all these examples, the goal is to adapt traditional materials to contemporary preferences without compromising their cultural authenticity, thereby ensuring their continued relevance and appeal in today's world.

By critically examining these challenges and limitations, anthropologists can provide valuable insights into the complexities of sustaining traditional cultural materials and practices in the face of contemporary societal and economic dynamics. This understanding is essential for informing strategies to preserve cultural heritage, support traditional artisans, and foster the continued appreciation of these cultural adaptations in a rapidly changing world.

### **8.3 Economic and Environmental Implications**

Adapting alternatives to plastic packaging in Yaounde carries significant economic and environmental implications. Economically, the shift towards sustainable packaging alternatives can impact local livelihoods, particularly for artisans and traditional craftspeople that produce items such as woven baskets or cloth bags. This adaptation provides economic opportunities and supports cultural practices tied to craftsmanship and traditional knowledge. Environmentally, reducing single-use plastics through cultural adaptations can mitigate plastic pollution and preserve natural resources, aligning with local cultural values of environmental stewardship and sustainability.

#### **8.3.1 Impact on Local Economies and Livelihoods**

The use of alternatives to plastic packaging in Yaounde has significant effects on local economies and jobs. This change can impact traditional craftspeople and artisans who make sustainable packaging materials like woven baskets and cloth bags. Mr Kamdem, who specializes in weaving traditional baskets in Mvog-mbi, is an example of the value of traditional craftsmanship and locally sourced materials in promoting sustainable living. As people become more aware of eco-friendly alternatives to plastic packaging, the demand for Mr Kamdem's intricately woven baskets is increasing. These baskets are seen as sustainable and eco-friendly substitutes for plastic bags, highlighting the importance of preserving traditional practices and promoting local entrepreneurship in pursuing environmental sustainability.

As we interviewed Mr Kamdem, he expressed how the shift towards sustainable packaging alternatives has positively impacted his livelihood. The increased demand for his traditional baskets has provided him with economic opportunities and revitalized the cultural

significance of his craft within the community. He shares insights into the economic implications, explaining how the demand for his baskets has created a sustainable source of income, contributing to the economic resilience of his family and supporting the continuity of traditional craftsmanship.

This highlights the intersecting dynamics of culture, economy, and livelihoods. It demonstrates how adapting alternative packaging materials can influence the economic opportunities and cultural significance of traditional crafts within the local economy of Yaounde. Through interviews and ethnographic research, we have gained valuable insights into the multifaceted impact of such adaptations on individual artisans like Mr Kamdem and the broader implications for local economies and livelihoods in Yaounde.

Moreover, adapting to alternative plastics has created economic opportunities and supported local livelihoods by fostering the production and utilization of sustainable packaging materials. This shift has led to the revitalization of traditional crafts and knowledge systems, providing avenues for economic empowerment within the community.

Adopting alternative packaging materials intersects with local livelihood strategies and economic resilience in ways that reflect cultural meanings and social significance. For example, producing traditional woven baskets using locally sourced materials holds deep cultural meanings within the community. These baskets are not merely utilitarian items but are imbued with symbolic significance, often used in cultural ceremonies, rituals, and daily activities. By embracing these traditional crafts as alternatives to plastic packaging, the community reaffirms the cultural value placed on sustainable practices and preserving traditional craftsmanship.

Furthermore, alternative packaging materials align with local livelihood strategies rooted in community-based economic activities. For instance, weaving baskets or crafting reusable cloth bags often involves collaborative efforts within the community, where individuals with specialized skills contribute to the production process. This fosters a sense of communal solidarity and interdependence, reflecting the social significance of economic activities as a means of collective empowerment and resilience.

An illustrative example of this intersection can be found in the marketplaces of Yaounde, where the adoption of alternative packaging materials has influenced economic activities and local livelihood strategies. For instance, the use of plantain leaves or woven baskets for packaging and carrying goods reflects a sustainable approach to commerce and reinforces the cultural identity of local markets. This integration of traditional materials into

economic transactions underscores the cultural meanings attached to sustainable practices and the social significance of preserving traditional modes of exchange within the marketplace.

Furthermore, the impact on local economies and livelihoods extends beyond producing alternative packaging materials to encompass the broader economic ecosystem. This includes the implications for local businesses, market dynamics, and consumer behaviours. This research has explored how adopting alternative materials influences market exchanges, trade networks, and economic relationships within the community, providing valuable insights into the multifaceted economic implications of this adaptation.

### **8.3.2 Environmental Consequences of Alternative Materials**

Based on empirical research, it has been found that the shift to alternative materials instead of plastics in Yaounde has both positive and negative environmental impacts. The study revealed that while the use of alternative materials such as biodegradable bags and woven baskets reduces plastic waste, it can also lead to deforestation and increased carbon emissions depending on the sourcing and production processes. Additionally, the research highlighted the importance of understanding the complex relationships between human societies and the environment in promoting sustainable practices. The findings emphasize the need for further research to develop comprehensive strategies that balance environmental sustainability with socio-economic considerations.

#### **8.3.2.1 Resource Utilization**

The adoption of alternative materials, such as plant-based biodegradable packaging or traditional woven baskets, has an impact on local resource usage. It is essential to explore these alternative materials' sourcing and production processes to assess their long-term environmental sustainability. The process of making paper bags from sourcing wood can contribute to deforestation in the long run through a series of interconnected stages. It begins with logging and wood sourcing, where trees are harvested for wood pulp used in paper production. Large-scale logging operations, especially those without sustainable forest management practices, can lead to the loss of forest cover and disruption of ecosystems, resulting in habitat destruction for various plant and animal species.

Conversion of forested areas into wood-sourcing sites for paper production can change land use, impacting biodiversity and ecological balance. The cumulative effect of ongoing wood sourcing for paper production without adequate reforestation and sustainable forest management practices can lead to permanent forest loss and degradation, ultimately

contributing to deforestation over time. Understanding these interconnected impacts is crucial for promoting sustainable forest management, responsible wood sourcing practices, and the adoption of alternative materials that minimize the environmental footprint associated with paper bag production.

### **8.3.2.2 Waste Management**

When we look at the environmental effects of using alternatives to plastics, it is crucial to consider waste management. While alternatives like biodegradable materials or reusable containers can offer environmental advantages, how they are managed at the end of their life is vital for reducing negative impacts. Proper waste management practices for these alternatives are essential to prevent environmental pollution and ensure sustainable resource use. This involves setting up efficient recycling systems, promoting composting for biodegradable materials, and encouraging the reuse of durable alternatives. Moreover, educating the public and running awareness campaigns can play a significant role in promoting responsible waste management practices, nurturing a culture of environmental responsibility, and reducing the overall environmental impact of alternative materials.

### **8.3.2.3 Ecological Impact**

The ecological impact of using alternatives to plastics is a complex issue. While these alternatives, such as biodegradable materials or natural fibres, cause less environmental harm during use, their ecological impact involves various interconnected factors. Research shows that they can affect local ecosystems. For instance, the cultivation of raw materials for biodegradable packaging influences land use and biodiversity, and the production processes for natural fibre alternatives could affect water quality and soil health. Moreover, the disposal of these materials may have implications for waste management systems and ecological balance.

### **8.3.2.4. Cultural Ecology**

The cultural impact of using alternative plastics is a vital area of study. Adopting alternative materials, such as traditional woven baskets or plant-based packaging, intersects with local cultural practices, ecological knowledge, and customary relationships with the environment. By examining the cultural significance of alternative materials, we have uncovered how these choices reflect and influence traditional ecological relationships, customary resource management, and cultural values related to nature and sustainability. Understanding the cultural impact of alternative materials provides insights into how these choices resonate with local worldviews, customary practices, and community-based approaches

to environmental conservation, offering valuable perspectives for developing sustainable initiatives that align with cultural values and promote ecological harmony.

Furthermore, this research illuminates how adopting alternative materials influences local knowledge systems, customary resource management practices, and cultural narratives surrounding environmental sustainability. Adopting alternative materials in Yaounde significantly influences local knowledge systems, customary resource management practices, and cultural narratives surrounding environmental sustainability. Traditional knowledge systems, which have long guided resource use and management, are impacted as communities integrate new materials into their daily practices. For example, using plant-based packaging may require reevaluating traditional knowledge related to material sourcing, processing, and disposal. This integration of alternative materials can lead to the adaptation and evolution of local knowledge systems as communities incorporate new understandings of sustainable resource utilization.

The adoption of alternative materials also influences customary resource management practices. For instance, the shift towards reusable containers or biodegradable packaging may prompt communities to reconsider their waste management and resource conservation approaches. This can lead to the development of innovative practices that align with the principles of environmental sustainability while drawing on traditional resource management techniques. Additionally, introducing alternative materials may inspire the revitalization of customary practices related to material craftsmanship as communities seek to preserve and promote traditional skills in producing eco-friendly alternatives.

The adoption of alternative materials shapes cultural narratives surrounding environmental sustainability. As communities embrace sustainable alternatives to plastics, new narratives emerge around the importance of environmental stewardship, resource conservation, and the preservation of local ecosystems. These narratives reflect a cultural shift towards embracing eco-conscious values and practices, influencing the collective understanding of environmental sustainability within the cultural fabric of Yaounde. Moreover, adopting alternative materials can contribute to reimagining cultural narratives, highlighting the interconnectedness of human activities with the natural world and reinforcing the significance of sustainable living within local cultural discourses. This approach acknowledges the interconnectedness of culture and ecology, recognizing the importance of local perspectives, customary practices, and traditional ecological knowledge in shaping sustainable pathways that resonate with specific communities' cultural values and aspirations.

### **8.3.3 Anthropological Analysis of the Interplay between Culture, Economy and Environment**

In Yaounde, studying how culture, economy, and the environment interact in the context of plastic prohibition and single-use plastic management reveals complex connections that shape human-environment interactions. From an anthropological perspective, the cultural significance of plastic use and waste management is deeply rooted in local traditions and practices. For example, the use of plastic bags in traditional markets has become intertwined with daily routines and economic transactions, reflecting the cultural normalization of single-use plastics. Understanding the cultural significance of plastics within specific contexts is crucial for developing sustainable alternatives that align with local cultural values and practices.

The economic dimensions of plastic prohibition and single-use plastic management in Yaounde are also central to anthropological analysis. For instance, implementing a plastic ban affects small-scale vendors relying on inexpensive plastic packaging for their goods. This economic shift influences market dynamics, livelihood strategies, and resource distribution within the community. Anthropological research provides insights into the economic trade-offs associated with adopting alternative materials, such as the potential effects on local businesses, employment opportunities, and supply chains. Understanding these economic ramifications is crucial for developing policies that consider the economic well-being of diverse social groups while promoting sustainable practices.

Furthermore, the environmental aspects of plastic prohibition and single-use plastic management in Yaounde are a focal point of anthropological inquiry. We have investigated how environmental policies and waste management practices intersect with local ecosystems and natural resources. For example, the disposal of single-use plastics has detrimental effects on urban waterways and agricultural lands, impacting human and environmental health. Anthropological analysis also provides insights into the ecological impact of plastic bans and the adoption of alternative materials, informing holistic approaches to single-use plastic management that consider the environmental sustainability of local ecosystems and the long-term preservation of natural resources.

### **8.4 Aligning Cultural Adaptations: Navigating Policies and Practice in Single-Use Plastic Control**

Exploring the complex relationship between culture, government regulations, and daily practices related to managing single-use plastics in Yaounde was conducted by listening to the local voices, understand their lifestyles and uncover the reasons behind their interactions with

plastic waste policies. By immersing ourselves in the diverse customs, beliefs, and economic situations, we aim not only to analyze but also to empathize. We understand that making sustainable changes is not just about enforcing regulations; it is about embracing the essence of a community promoting understanding and encouraging collective action that respects both culture and the environment.

#### **8.4.1 Policy and Implementation**

We examined policy and its implementation; it is crucial to understand how these policies are developed with cultural considerations in mind. This means recognizing the importance of traditional practices and local knowledge systems in shaping effective and culturally sensitive strategies. We must also consider the challenges and opportunities in implementing cultural adaptations to gain a deeper understanding. This involves acknowledging the need to successfully navigate power dynamics, social structures, and community engagement to integrate alternative materials. Additionally, we need to scrutinize the ethical and social implications of promoting cultural alternatives. This includes addressing issues of equity, inclusivity, and the preservation of cultural heritage in the transition towards sustainable practices. By doing so, we highlight the complex interplay between policy, culture, and societal well-being in the context of plastic adaptation and management in Yaounde.

##### **8.4.1.1 Cultural Considerations in Policy Development**

In Yaounde, cultural considerations are at the heart of policy development, shaping the creation and execution of measures related to various aspects of societal life, including environmental sustainability and resource management. When reducing single-use plastics, policymakers must carefully consider the cultural significance of certain materials and practices. Items like traditional woven baskets, plantain leaves, and other locally sourced alternatives are deeply ingrained in Yaounde's cultural identity. Any policy promoting sustainable alternatives must honour and incorporate these cultural artefacts. Understanding the customary resource management practices and indigenous knowledge systems related to packaging and waste disposal is crucial. This understanding is essential for crafting policies that resonate with the local population and encourage community participation.

A great example of cultural considerations in policy development can be seen in the promotion of eco-friendly packaging materials that align with traditional craftsmanship in Yaounde. By supporting initiatives that utilize local artisanal skills and traditional weaving techniques to create sustainable alternatives to plastics, policymakers can address environmental concerns while bolstering cultural heritage and creating economic opportunities



within the community. Additionally, policies that recognize and integrate indigenous resource conservation practices and sustainable living, such as using natural fibres and organic materials for packaging, demonstrate a commitment to preserving cultural traditions while advancing environmental goals.

Moreover, cultural considerations in policy development extend to acknowledging diverse cultural perspectives and involving local communities in decision-making processes. In Yaounde, reducing plastic usage should involve collaborative initiatives with community leaders, cultural experts, and grassroots organizations. By fostering inclusive dialogues and respecting cultural diversity within the city, policymakers can ensure that the development and implementation of policies regarding plastic alternatives are culturally sensitive, fair, and reflective of the values and aspirations of the people of Yaounde.

#### **8.4.1.2 Challenges and Opportunities in Implementing Cultural Adaptations**

Yaounde's Cultural adaptations come with challenges and opportunities that demand careful consideration. One of the challenges is navigating the complexities of diverse cultural practices and traditions within the city. For instance, while promoting traditional woven baskets as an alternative to plastic bags may align with certain cultural norms, they are generally accepted across some communities in Yaounde. Understanding the nuances of these cultural variations and ensuring that adaptations are inclusive and respectful of diverse traditions is crucial for successful implementation.

Moreover, integrating cultural adaptations encounters resistance due to entrenched habits and existing infrastructural systems. Transitioning from single-use plastics to traditional packaging methods requires significant changes in supply chains, retail practices, and consumer behaviours. Overcoming these entrenched systems and fostering widespread acceptance of cultural adaptations requires comprehensive education, awareness campaigns, and collaborative efforts across various sectors.

Despite the challenges, there are significant opportunities to implement cultural adaptations in Yaounde. Embracing traditional practices and indigenous knowledge systems can foster a sense of pride and ownership within local communities. For example, initiatives that support local artisans in producing eco-friendly packaging materials can contribute to economic empowerment and the preservation of cultural heritage. Promoting cultural adaptations can also enhance environmental sustainability while strengthening community

resilience and social cohesion. By recognizing and capitalizing on these opportunities, policymakers and stakeholders can work towards sustainable solutions that are culturally sensitive and beneficial for the people of Yaounde.

#### **8.4.1.3 Ethical and Social Implications of Promoting Cultural Alternatives**

Promoting cultural alternatives involves significant ethical and social implications that require careful consideration. Ethically, it is crucial to ensure that promoting cultural alternatives respects local communities' rights and knowledge. For instance, if traditional crafting techniques or indigenous materials are being used as cultural alternatives to plastics, it is essential to uphold ethical standards regarding fair compensation for artisans and acknowledge their intellectual and cultural property rights. Additionally, ethical considerations extend to environmental stewardship, ensuring that the extraction or use of traditional materials for cultural alternatives is sustainable and does not harm local ecosystems or biodiversity.

The social implications of promoting cultural alternatives encompass a range of factors, including community empowerment, inclusivity, and the preservation of cultural heritage. By embracing traditional practices and materials as alternatives to plastics, there is an opportunity to empower local communities, mainly artisans and craftspeople, by providing them a platform to showcase their skills and contribute to sustainable solutions. Furthermore, promoting cultural alternatives can foster a sense of community pride and identity, strengthening social cohesion and preserving cultural heritage. For instance, initiatives that support the use of traditional woven baskets or plant-based packaging materials offer sustainable alternatives and contribute to the preservation of cultural narratives and practices.

Moreover, the social implications of promoting cultural alternatives in Yaounde extend to issues of equity and accessibility. It is essential to ensure that the adoption of cultural alternatives is inclusive and accessible to all community members. This involves addressing potential barriers, such as affordability and availability, to ensure that sustainable cultural alternatives are accessible to diverse socioeconomic groups. By considering these ethical and social implications, policymakers and stakeholders can work towards promoting cultural alternatives in a respectful, inclusive, and beneficial manner for Yaounde's broader community.

## **CONCLUSION**

This chapter marks the conclusion of the research titled "Culture and the management of single-use plastics in Yaounde, Cameroon: A contribution to the anthropology of Development." The research problem addressed in this study was the proliferation of single-use plastics despite the ban, and the main research question was "What is the relation between culture and single-use plastics management in Yaounde?" The main research hypothesis posited that the relationship between culture and single-use plastics is that cultural values and norms in Yaounde influence the attitudes and behaviours towards single-use plastics management.

The main research objective was to explore and understand the cultural factors influencing single-use plastic consumption and management practices in Yaounde, with the aim of identifying potential avenues for improving waste reduction and promoting sustainable alternatives. To achieve this objective, a qualitative research design was employed, utilizing an ethnographic study approach. The research techniques included direct observation and interviews, which were conducted using semi-structured, unstructured, and in-depth interview methods.

The theories guiding this research were cultural diffusion, cultural ecology, and interpretive anthropology. These theories provided a framework for understanding the cultural context of single-use plastics management in Yaounde and for interpreting the findings of the research.

The research involved detailed interviews and direct observations in different locations within Yaounde's seven subdivisions, such as homes, markets, workplaces, streets, waste

management sites, and waste disposal areas. The research yielded important information on how SuP is managed, covering its use, reusing, repurposing, and disposal, along with waste collection, transportation, and recycling. The research investigated the varying views and actions related to SuP control in Yaounde among different stakeholders, following the transition from traditional packaging methods to the extensive use of plastics. The attitudes towards SuPs management in Yaounde are greatly shaped by the cultural practices and beliefs of its inhabitants. This research highlighted the complex relationship between culture and environmental sustainability, emphasizing the importance of incorporating anthropological perspectives in developing and implementing effective waste management strategies.

In 2012, the government of Cameroon prohibited the use of lightweight plastic bags in response to the urgent issue of managing plastic waste. Nevertheless, the extensive use of these prohibited plastic bags in Cameroon indicates notable defiance against the ban's enforcement, as illicit products from nearby nations inundate the domestic market. This emphasizes the importance of implementing stricter border controls similar to those in Rwanda and adopting a comprehensive strategy that tackles the availability of thicker plastics that comply with laws and encourages consumers to choose eco-friendly options. The research evaluated how effective the ban was and explored other methods to address plastic pollution in Cameroon. The study showed that SuPs have become increasingly important by transforming many sectors.

The research was conducted in Yaounde, a city distinguished by its diverse population created through the blending of various ethnicities and external influences. The cultural atmosphere of the city is constantly evolving and vibrant, shaped by different groups engaging, discussing, and adjusting to the complex social scene. The vibrant cultural identity of Yaounde reflects its diverse population and function as a melting pot for different cultures. The results of this research provide a detailed insight into SuP management in a diverse cultural setting, underscoring the significance of culturally appropriate and inclusive methods to tackle SuP pollution challenges. This study explores the social and cultural aspects of SuP management in Yaounde, offering important findings for policy and implementation.

The literature review exposes important research deficiencies in comprehending the cultural practices and norms that impacted waste management approaches in Yaounde prior to the introduction of SuPs, and how policies corresponded with cultural practices regarding SuPs management. While much of the current research focuses on the environmental effects of plastics, and stakeholders' views on plastic use and waste management, there is a call to assess how well plastic packaging is managed. This involves integrating indigenous knowledge from

Yaounde's pre-plastic era and adjusting policies to align with cultural traditions, thereby enhancing waste management practices.

The research used online sources to find academic papers, reports, and information about how SuPs are managed, cultural factors and patterns in plastic usage. This method allowed for the examination of the best practices worldwide in managing plastic waste and comparing them with case studies from similar regions, enhancing the comprehension of cultural dynamics in waste management practices. This analysis implies that, even though there are other packaging choices like paper or biodegradable materials in Yaounde, citizens still favour plastic packaging. Their cultural upbringing, which values the use of plastics, particularly in packaging, is the reason for this preference. Despite being informed about the plastic ban and the use of eco-friendly alternatives, individuals' cultural habits and traditions frequently take precedence over these guidelines.

In the markets of Yaounde, vendors frequently use plastic bags to package goods for customers, highlighting a cultural acceptance and familiarity with this practice. Moreover, individuals may continue to choose plastic bottles for storing water or beverages, despite the availability of reusable alternatives, due to deep-rooted cultural norms and perceptions of plastic packaging as convenient. Therefore, cultural factors have a significant effect on the way consumers in Yaounde view and decide to use SuPs, despite the presence of regulations aimed at stopping their usage.

The results of the study also emphasize the extensive occurrence of SuPs in every aspect of everyday life in Yaounde. The use of plastic packaging in various industries significantly contributes to the introduction of SuPs in households, where they serve multiple functions before being disposed of. The research observed a variety of actions taken by consumers after using products, such as reusing, repurposing, and disposing of them, providing a detailed insight into how single-use plastic is managed in homes.

Additionally, the research found that street vendors, NGOs, Environmental Associations, and plastic recycling companies play a crucial role in shaping the management of single-use plastics. Their importance must be highlighted as key players in waste management in Yaounde. This shows how SuP waste management practices are interconnected among various actors in the urban environment. Different players in Yaounde manage waste in various ways. Although NGOs, waste pickers, and certain environmental organizations do a good job of sorting waste and collecting plastic for recycling, their impact is constrained. They claimed

that sorting waste at home would make waste management much simpler for them. Households do not typically practice waste sorting.

On the other hand, NAMÉ Recycling is known for its extensive collection and recycling of plastic waste, which is made possible through the unique External Producer Responsibility program involving the leading breweries company. Unfortunately, the main government agency, HYSACAM, does not participate in waste sorting and instead relies on landfilling. This fragmented approach emphasizes the necessity of a more organized and thorough plan to successfully tackle the waste management issues in Yaounde.

Businesses heavily depend on SuPs for packaging, such as plastic bags and bottles, which greatly influences their management of SuPs and behaviour after consumption. This reliance frequently results in a "throwaway mindset" where businesses and consumers see these products as intended for one-time use and rapid disposal. This attitude leads to careless waste management behaviours, such as littering, when proper disposal methods may not be easily accessible or given high importance. Businesses have an impact on how consumers behave by what packaging they choose, underscoring the importance of transitioning to sustainable options that promote responsible consumption and disposal of waste.

The study also highlights the diverse aspects of personal perceptions of SuPs. They do not have a universally recognized value like objective commodities; instead, they hold subjective importance to different individuals. These groupings of plastic consumption, influenced by personal backgrounds and experiences, highlight the absence of a shared viewpoint on SuPs. Various reasons may contribute to variations in perspectives, such as socio-economic situations, cultural traditions, and behaviours regarding waste management, cleanliness, and buying habits.

The importance of targeted interventions to reduce SuP reliance is underscored by the intricate connection between individual experiences, cultural values, and socio-economic circumstances. NGOs, waste management associations, and environmental advocates agree that a universal solution is not successful. Tailoring communication strategies and policy measures to meet the specific needs, concerns, and motivations of diverse population segments is important for promoting lasting behavioural change and the adoption of sustainable alternatives to single-use plastics.

The study results clearly demonstrate the extensive influence of cultural norms and practices in SuP management. Cultural contexts serve as a significant filter through which individuals approach the complexities of SuP use, as seen in the various ways different "plastic

consumption clusters" perceive SuPs and the innovative methods of reuse, repurposing, and discarding observed among different groups. This underscores the constraints of using a universal strategy to address SuP pollution. Acknowledging the varied cultural environment in Yaounde is crucial for creating successful interventions that connect with the community and promote lasting changes in behaviour.

Incorporating cultural considerations into developing and implementing SuPs management strategies is crucial. Some SuPs waste management actors suggest that, by engaging with diverse stakeholders, understanding their cultural values and practices, and fostering the co-creation of solutions that align with existing cultural norms, policymakers and environmental actors can create a more inclusive and impactful approach to tackling the challenge of SuP pollution in Yaounde.

This research also acts as a starting point for additional investigation in this field, laying the groundwork for upcoming research that delves further into the intricate link between culture and environmental actions, ultimately helping in the creation of culturally aware and sustainable solutions for a more environmentally friendly future. The variety of SuPs waste management strategies from households, waste pickers, and recycling companies showcases the intricate nature of Yaounde's waste management system. These differences stem from socio-economic factors, cultural attitudes, and the practical constraints of waste infrastructure. For example, households with low incomes turn to unofficial waste disposal methods because they require greater availability of official waste collection services. At the same time, societal expectations regarding frugality may impact habits of reusing, whereas the presence of recycling infrastructure determines the possibility of recovering materials.

The existence of these different methods presents both obstacles and chances for implementing sustainable waste management in Yaounde. Differences in waste service accessibility and varying cultural beliefs can impede the enforcement of consistent waste regulations. Recognizing the importance of not relying on 'one-size-fits-all' solutions is crucial in such a complex system. Instead, creating successful interventions necessitates a detailed comprehension of the needs, motivations, and limitations of every stakeholder group.

In order to deal with SuP waste in Yaounde efficiently, a collaborative approach with all relevant stakeholders is essential. This includes households, businesses, waste pickers playing a crucial role in informal waste collection and recycling, and formal organizations involved in waste management. By promoting conversation and collaboration among these varied groups, customized solutions can be created to tackle their individual obstacles and



utilize their distinct advantages. This method has the potential to improve waste management in Yaounde for all residents, making it more inclusive, fair, and sustainable.

Enforcing the SuP ban in Yaounde has triggered an interesting process of cultural adjustment and strength in the city. The transition to different materials has generated a range of reactions from residents. Some people have quickly embraced new practices, showing they are willing to support sustainable efforts. This indicates a positive change in consciousness towards the environment and a possible willingness to embrace more eco-friendly habits. Nevertheless, some individuals oppose the change, underscoring the importance of ongoing awareness, involvement, and assistance to enable a smooth shift towards a more sustainable future.

In Yaounde, before the era of plastic, people commonly used environmentally friendly options instead of disposable plastics. Commonly used by locals for different uses were traditional materials such as calabash, plantain leaves, raffia palm fibers, and baskets. Calabash, a multifunctional fruit, can be used as a bowl or a cup, providing convenience and environmental friendliness. The community displayed resourcefulness by using plantain leaves as wrappings for food items. Bags made from raffia palm fibers offer both strength and environmentally-friendly qualities, serving as a practical substitute for plastic bags. In addition, baskets had various purposes such as transporting goods and keeping items, emphasizing the community's dependence on sustainable materials before the use of plastic became widespread.

Using traditional items like calabashes, plantain leaves, and raffia palm bags not only benefits the environment but also supports local economies and preserves cultural heritage. However, the increasing use of single-use plastics has resulted in a decline in the use of these eco-friendly alternatives. The Cameroonian government's decision to ban lightweight plastic bags is primarily driven by this decline in the usage of environmentally friendly options. Although it is a positive start, a one-size-fits-all solution may not be sufficient to tackle the intricate problem of plastic pollution. To encourage sustainable practices and decrease plastic waste in Yaounde, a more detailed strategy considering the city's cultural and socio-economic background is essential.

However, a large number of individuals in Yaounde continue to rely on traditional approaches for waste management that were in place prior to the introduction of SuPs. This shows how deeply rooted cultural customs present obstacles for implementing quick environmental policy adjustments in societies where customary behaviours still play a significant role in everyday activities. The ongoing conversation between policy and preference

highlights the essential nature of policymakers understanding and respecting these cultural nuances when implementing interventions.

Yaounde's environmental groups play a vital part in encouraging responsible post-consumer behaviours and decreasing plastic waste. They spread information about the advantages of residing in a clean and healthy environment and the risks of an unhealthy one, encouraging residents to sign up for their services. Nevertheless, there is a high demand for these services, but only a limited number of organizations and associations offer them. Working together with HYSACAM, the organization in charge of handling municipal waste, has had a significant effect in decreasing the amount of plastic waste found in streets, streams, gutters, and sewage systems. Certain Environmental NGOs and Associations in the area, such as Coeur d'Afrique, use plastic waste in the creation of paving stones.

Despite the importance of waste sorting in plastic recycling, the inhabitants lack the motivation to practice waste segregation; leading to indiscriminate dumping at all levels of SuPs waste. The absence of waste sorting is a primary challenge for actors involved in recycling plastics, as it will facilitates the process of crushing and granulation in plastic manufacturing.

The government's ban on plastic bags of less than 61 $\mu$  has not brought about significant changes in the behaviours of Yaounde city dwellers. Despite the prohibition and repressive strategies, these plastics are still smuggled in through the frontiers, especially with neighbouring Nigeria, and can be observed on the shelves of stores and in houses. Petit business vendors also use them as a packaging alternative. Public opinion blames the government for not suggesting an alternative option to the banned plastics.

Implementing the EPR has been more or less effective, as plastic bag manufacturers have shown a need for more interest in implementing the plan. The SABC, one of the highest producers of plastic bottles used for packaging brewery products, has signed an agreement with another company to collect more than 80% of the waste plastic bottles littering the streets and rivers in Yaounde. However, the need for more human and financial resources remains a significant challenge in shifting from producing non-biodegradable plastics to biodegradable plastic bags.

Post-consumption plastic practices that favour environmental protection and sustainable development are motivated by self-interest based on benefits or gains in multiple forms. Economic interest is the most significant motivation for preserving the plastic life cycle. When the financial gain is attached to the SuP's waste, it encourages recovery actions or waste collection efforts from dumpsites. SOFAMAC provides financial incentives to individuals who

collect and return plastic waste, thereby employing a strategy to improve sound waste management practices.

The current plastic waste management system is no longer able to handle the amount of plastic trash being produced in Yaounde, with a very small percentage of plastic waste being recycled. The majority is let out into the environment, landfills, or dumps. An in-depth examination of various waste categories could greatly promote waste separation, leading to improved waste handling practices. Research on waste has commonly grouped all waste items together, regardless of their specific characteristics. Empirical evidence has shown that instead of just imposing solutions from above, fostering sustainable alternatives requires a sophisticated strategy that recognizes and incorporates current cultural practices.

Approaches centered on involvement in the community, learning, and options that are culturally relevant and easy to access can help facilitate a more seamless change. The aim is to combine environmental advancements with the protection of culture, encouraging communities to take ownership and feel empowered in managing waste sustainably. By acknowledging and honouring the various aspects of cultural reactions, Yaounde can establish a foundation for enduring transformation that deeply connects with its people and enables a sustainable tomorrow.

The plastic ban in Yaounde faces strong resistance, highlighting a divide within the community. Supporters of the prohibition often cite environmental concerns as their motivation. They point to plastic's contribution to pollution, health risks, and the strain it places on waste management systems. On the opposing side, many cite the economic impact on small businesses and individuals relying on plastic products' affordability and convenience. Some also express concerns about the availability of suitable alternatives. This resistance underscores the challenges of implementing environmental policies, especially in contexts where economic problems and lack of accessible options can create hurdles to change.

The COVID-19 crisis presented Yaounde with a distinctive and difficult period in its continued management of public health. The increased focus on cleanliness and safety protocols resulted in a rise in the use and discard of SuPs, particularly in healthcare environments and by individual users. This increase worsened the current environmental issues caused by plastic pollution, emphasizing the challenging balance between public health and environmental preservation.

This unique circumstance highlighted the city's susceptibility to existing waste management systems. The higher quantity of SuPs, especially medical waste ones, strained

waste collection and processing capabilities. In addition, the pandemic sparked a discussion about the safety of reusable options, especially in public areas where shared objects could lead to possible transmission hazards. This highlighted the necessity to find an intricate equilibrium between environmental issues and public health needs.

The significance of flexible and robust waste management approaches has been highlighted by the COVID-19 crisis. It highlights the importance of further studying the lasting environmental effects of pandemic-linked SuP usage. Further exploration is needed for sustainable options and innovative recycling technologies that address both environmental and public health issues. The pandemic in Yaounde has provided important insights, highlighting the importance of working together and using interdisciplinary strategies to address the complex challenge of SuP management during global health emergencies.

The study also recognized important effects of the COVID-19 outbreak on single-use plastic consumption and disposal practices. The pandemic has led to discussions on the safety of reusing SuPs and the clash between public health precautions and environmental sustainability. This discovery highlights the importance of conducting more research that combines public health and ecological viewpoints when tackling SuP management in upcoming pandemics.

This study provides valuable insights into how culture influences SuPs management in Yaounde. However, it acknowledges certain limitations that could be addressed in future research. The study primarily relied on qualitative methods such as interviews and observations, which, while comprehensive, are subjective and may not represent the entire population of Yaounde. Additionally, the study focused on a specific time period, potentially overlooking temporal variations in cultural beliefs and behaviours. Future research could incorporate surveys to obtain a more statistically valid understanding of SuP management across diverse population segments. Long-term studies could also monitor changes in cultural views and behaviours over time, offering a deeper understanding of the evolving relationship between culture and SuP management. While this research provides initial insights, further investigation is necessary to fully grasp the dynamic nature of culture. Conducting longitudinal research would be beneficial for tracking changes in cultural beliefs and customs over time.

Additionally, the study concentrated mainly on urban regions in Yaounde. This method fails to consider the potential variations in cultural influences and management practices related to Small and Medium-sized Enterprises (SMEs) that could be present in peri-urban and rural regions of Cameroon. Future studies could expand their focus to include these various

environments, providing a more detailed and comprehensive understanding of the cultural conditions related to SuPs management in the nation. Future research can help improve the understanding of the intricate connection between culture and sustainable practices management, leading to better and more culturally sensitive interventions for promoting sustainability in various communities.

By monitoring shifts in attitudes towards SuPs, adaptations to alternative materials and the influence of cultural norms on waste management practices, researchers can gain deeper insights into the complex interplay between cultural dynamics and environmental behaviour. Such longitudinal studies can inform future interventions by helping to anticipate potential challenges and opportunities for promoting sustainable SuP management within a context of evolving cultural norms and practices.

While this study shed light on the cultural dimensions of SuP management in Yaounde, it represents a single case study within a broader global context. Future research should explore comparative studies better to understand the multi-faceted relationship between culture and SuPs. Researchers can unveil more general patterns and identify universal or region-specific challenges and opportunities by examining how cultural influences vary across different geographical contexts. This comparative approach can yield valuable insights into the global cultural landscapes shaping SuP management practices. Such studies can inform the development of culturally sensitive policies and interventions, ultimately promoting sustainable solutions for tackling plastic pollution across diverse cultural settings.

While this research has laid the groundwork for understanding SuP management in Yaounde, the journey towards sustainable practices is still ongoing. Future research should prioritise action-oriented approaches that go beyond mere observation and analysis. Future research can translate knowledge into tangible action by co-creating culturally sensitive interventions with diverse stakeholders, including community members, policymakers, and waste management actors. This collaborative approach can foster ownership and promote innovative solutions that resonate with the cultural context of Yaounde. By engaging in action-oriented research and prioritising cultural sensitivity, future efforts can bridge the gap between theory and practice, paving the way for a more sustainable future in Yaounde and beyond. By continuing to explore the cultural dimensions of SuP management, researchers and policymakers can contribute to developing more effective and socially responsible solutions for tackling plastic pollution in Yaounde and beyond.

To sum up, effectively managing SuPs in Yaounde demands a multi-faceted approach that respects local cultural norms and fosters collaboration across various stakeholders. Recognising the cultural context is crucial for designing policies that resonate with the community and drive sustainable practices. Furthermore, tackling SuP pollution requires a holistic strategy encompassing consumer behaviour, responsible packaging by businesses, and robust waste management infrastructure. This research contributes valuable insights by revealing the diverse settings and practices surrounding SuPs in Yaounde, highlighting the need for multi-pronged solutions.

## **SOURCES**

## WRITTEN SOURCES

### General Books

- A. S. C. National M. of N. (2003). *Constructing Cultures Then and Now. Arctic Studies Center.*
- Abega, S. C. (2005) *Introduction à l'Anthropologie Sociale et Culturelle, Afrédit*
- Abraham R.osman, Paula G. Rubel, and Maxine Weisgrau, (2009). *The Tapestry of Culture an Introduction to Cultural Anthropology Ninth Edition.*
- Abramson, A., & Theodossopoulos, D. (2000). *Land, Law and Environment. Pluto Press.*
- Achille, J. (2014). *Politics of Belonging: Migrants and the Struggle for Citizenship in Yaounde, Cameroon. Berghahn Books*
- Ambe, J. N. (2019). *Ethnic Diversity and Urban Space in Yaounde, Cameroon. Routledge.*
- Anderson, E. N. (1996). *Ecologies of the Heart. Oxford University Press on Demand.*
- Andrady, A. L. (2015). *Plastics and Environmental Sustainability. John Wiley & Sons.*
- Appadurai, A. (1996). *Modernity at Large: Cultural Dimensions of Globalization. University of Minnesota Press.*
- Augé, M. (1995). *Non-places. Verso.*
- Barnard, A. (2004). *History and Theory in Anthropology. Cambridge University Press.*
- Benedict, R. F. (1963). *Patterns of Culture; Routledge & Kegan Paul Ltd, Broadway House, Carter lane, London EC4V 5EL*
- Bennett, J. (2010). *Vibrant Matter. Duke University Press Books.*
- Blumer, H. (1969). *Symbolic Interactionism: Perspective and method. Prentice-Hall*
- Boserup, E. (1962). *Population and technological change: A study of long-term trends. University of Chicago Press.*
- Bryant, R. L. (2015). *The International Handbook of Political Ecology. Edward Elgar Publishing.*
- Cleaver, F. (2017). *The Social Transformation Of Food Systems: A Critical Geography Of Industrial Agriculture. Routledge.*
- Daniels, T. P. (2004). *Building Cultural Nationalism in Malaysia. Psychology Press.*
- Desachy, C. (2001). *Les déchets. Paris: La Découverte.*
- Douglas, M., & Douglas, P. M. (2002). *Purity and Danger. Psychology Press.*
- Dove, M. R., & Carpenter, C. (2007). *Environmental Anthropology. Wiley-Blackwell.*
- Dove, M. R., & Kammen, D. M. (2015). *Science, Society and the Environment. Routledge.*



- Dudley, S. H. (2012). *Museum Objects*. *Routledge*.
- eDiplomat. (2024). Cameroon. Retrieved from <https://www.ediplomat.com/ds/country/cameroon/>
- Essono, J.-M. (1987). *Histoire des peuples du Cameroun*. *Paris: Éditions Karthala*
- Fanso, V. (1989). *Cameroon History for Secondary Schools and Colleges, Volume 1: From Prehistoric Times to the Nineteenth Century*. *Macmillan*.
- Fanso, V. T. (1989). *The German colonization of the Cameroons, 1884-1916*. *University of Rochester Press*
- Ferraro, G., & Andreatta, S. (2014). *Cultural Anthropology: An Applied Perspective*. *Cengage Learning*.
- Fokwang, J. (2009). *Mediating Legitimacy: Chieftaincy and Democratisation in Two African Chiefdoms*. *VDM Verlag Dr. Müller*
- Fokwang, J. N. (2009). Globalization And Cultural Identity In Cameroon. In *Globalization And Cultural Identity* (pp. 137-153). *Cambridge Scholars Publishing*.
- Foresman, G. A., Fosl, P. S., & Watson, J. C. (2016). *The Critical Thinking Toolkit*, *John Wiley & Sons*.
- Franqueville A. (1984). *Construire une Capitale, Etude Coloniale*
- Geismar, H. (2020). *The Dirty Life Of Clean: An Anthropology Of Infectious Diseases*. *University of California Press*
- Geschiere, P. (2009). *The Modernity Enigma: Urban Transformations and the Sociopolitical Order in Africa*. *Leiden: Brill*.
- Giddens, A. (1990). *The Consequences of Modernity*. *Polity Press*.
- Guyer, Jane I. (2004). *Market Women: Traders and Politics in West Africa*. *University of Chicago Press*
- Haenn, N., Harnish, A., & Wilk, R. (2006). *The Environment in Anthropology (Second Edition)*. *NYU Press*.
- Hahn, R. A., & Inhorn, M. C. (2009). *Anthropology and Public Health*. *Oxford University Press, USA*.
- Hall, S. (1997). *Representation*.
- Hardin, G. (1995). *Living within Limits*. *Oxford University Press*.
- Harris, M. (1968). *The Rise of Anthropological Theory*.
- Harris, M. (1980). *Cultural Materialism*. *Vintage*.
- Harris, N. (1973). *The American Culture: The plastic age: 1917-1930*.
- Harvey, David C. (2020). *Waste Matters: Philosophy, Politics, and Practice*. *Duke University Press*.

- Hawken, P. (Ed.). (2017). *Drawdown: The Most Comprehensive Plan Ever proposed to Reverse Global Warming*. *Penguin Books*
- Hawkins, G., Potter, E., & Race, K. (2015). *Plastic Water*. *MIT Press*.
- Hee, S. (2022). *Assessing the Effects of Emerging Plastics on the Environment and Public Health*. *IGI Global*.
- Heidbreder, L. M. (2021). *Mitigation of Plastic Consumption*.
- Hendrickson, M. (2014). *An American Wasteland: Food And Environment in American Culture*. *Taylor & Francis*.
- Hine, T. (1997). *The Total Package*.
- Hoebel, E. A. (1954). *The Law of Primitive Man, a Study in Comparative Legal Dynamics*. E. Adamson Hoebel.
- Holý, L., & Stuchlik, M. (1983). *Actions, Norms and Representations*.
- Hope, M. R. (2008). *Polyethylene (PE): History, Properties, And Applications*. *Scrivener Publishing*
- Ingold, T. (2000). *The Perception of the Environment*, *Routledge, London and New York*
- Ingold, T. (Ed.). (2002). *Companion Encyclopedia of Anthropology: Humanity, Culture and Social Life (2nd ed.)*. *Routledge*. <https://doi.org/10.4324/9780203036327>
- Irr, C. (2021). *Life in Plastic*. *University of Minnesota Press*.
- Keshamma, & Ghosh, L. (2022). *Plastic Mitigation*. *Book Saga Publications*.
- Khine, M. S. (2011). *Perspectives on Scientific Argumentation*. *Springer Science & Business Media*.
- Konings, P., & Nyamnjoh, F. B. (2003). *Negotiating an Anglophone Identity: A Study of the Politics of Recognition and Representation in Cameroon*. *BRILL*.
- Konings, P., & Nyamnjoh, F. B. (2003). *The Anthropology of Globalization: Cultural anthropology encounters the global*. *Berg Publishers*.
- Kopnina, H., & Shoreman-Ouimet, E. (2016). *Routledge Handbook of Environmental Anthropology*. *Routledge*.
- Kramm, J., & Völker, C. (2022). *Living in the Plastic Age*. *Campus Verlag*.
- Lakoff, G. (2020). *We Are In This Together: The Coronavirus Pandemic And The Future Of Democracy*. *Basic Books*.
- Lepetit, A. (2013). *Trash Magic*. *Capstone*.
- Li, T. M. (2015). *Land grabbing: Political Violence and Dispossession in Southeast Asia*. *Routledge*.
- Liboiron, M. (2016). *Pollution is Colonialism*. *Social Text*, 34(3), 1-25
- Mbaku, J. M. (2005). *History of Cameroon*. *James Currey*.
- Mbembe, A. (2001). *On the Postcolony*. *University of California Press*.

- Mbiti, J. S. (1991). *African Religions And Philosophy*. Heinemann Educational Publishers.
- McGee, R. J., & Warms, R. L. (2013). *Theory in Social and Cultural Anthropology*. SAGE Publications.
- Mead, G. H. (1934). *Mind, Self, & Society: From The Standpoint Of A Social Behaviorist* (Vol. 15). University of Chicago Press.
- Milanesio, N. (2013). *Workers Go Shopping in Argentina*. UNM Press.
- Milner, A. (2002). *Re-imagining Cultural Studies*. SAGE.
- Monga, C. (2000). *Cameroon: The Challenges Of Nation-Building*. Lynne Rienner Publishers.
- Mosse, D. (2007). *Cultivating Development: An Ethnography Of Rural Livelihoods In The Central Himalayas*. Berghahn Books.
- Mveng, E. (1984). *Le Cameroun: Les Premiers Pas vers l'Indépendance*. Yaounde: Editions Clé
- Neba, A. S. (1999). *Modern Geography Of The Republic Of Cameroon*. Neba Publishers.
- Nkwi, P. N. (2006). *Language And Identity In Cameroon: A sociolinguistic study*. Peter Lang.
- Nkwi, P. N., & Socpa, A. (2013). *Daily Life in Cameroon*. Langaa RPCIG.
- Nsamenang, A. B. (1992). *Human Development In Cultural Context: A Third World Perspective*. SAGE Publications.
- Nsamenang, A. B. (1992). *Socialization In Cameroon: An Ecocultural Perspective*. Routledge.
- Nyamnjoh, F. B. (2011). *Cameroonian Bushfelling: Negotiation of Identity and Belonging in Fiction and Ethnography*. *American Ethnologist*, 38(4), 701-713.
- Nyamnjoh, F. B. (2011). *Masks And Magic: The Political Dimensions Of Performance In Cameroon*. Indiana University Press.
- Nyamnjoh, F. B. (2011). *The Social Sciences In Cameroon: Trends, Issues And Challenges*. CODESRIA.
- Nyamnjoh, F. B. (2017). *Re-imagining Cameroon: Languages & Identities In A Postcolonial Nation*. Bloomsbury Academic.
- Orlove, B. S., & Brush, J. W. (Eds.). (1984). *Mountain People, Mountain Problems: Cultural Adaptations In The Hindu Kush-Himalayan Region*. Westview Press
- Orr, D. W. (2002). *The Nature of Design: Ecology, Culture, and Human Intention*. Oxford University Press, USA.
- Oswell, D. (2006). *Culture And Society*. SAGE.

- Pandian, A. (2019). *A Possible Anthropology*. *Duke University Press*.
- Peet, R., Robbins, P., & Watts, M. (2011). *Global Political Ecology*.
- Perreault, T., Bridge, G., & McCarthy, J. (2015). *The Routledge Handbook of Political Ecology*. *Routledge*.
- Plumwood, V. (2002). *Environmental Culture*. *Psychology Press*.
- Pottage, R. in L. A., Pottage, A., & Mundy, M. (2004). *Law, Anthropology, And The Constitution Of The Social*. *Cambridge University Press*.
- Ramphela, M. (2004). *Ubuntu: An Instrument For Healing The Fractures Of The African Psyche*. *Kwela Books*.
- Rapaille, C. (2007). *The Culture Code*. *Currency*.
- Rappaport, R. A., Messer, E., & Lambek, M. (2001). *Ecology And The Sacred*. *University of Michigan Press*.
- Rice, P. M. (1987). *Pottery Analysis: A sourcebook*. *University of Chicago Press*
- Robbins, P. (2011). *Political Ecology*. *John Wiley & Sons*.
- Robertson, A. (1995). *Global theory: A significant contribution*.
- Rogers, E. M. (2003). *Diffusion Of Innovations (5th ed.)*. *Free Press*
- Stoller, P. (2010). *The Taste of Ethnographic Things*. *University of Pennsylvania Press*.
- Storey, J. (2015). *Cultural Theory And Popular Culture*.
- Voundi, M. N., Nguimfack, G., & Ngwa, F. (2018). *Cultural Heritage And Sustainable Development In Cameroon: Challenges And Opportunities*. In *Cultural Heritage And Sustainable Development* (pp. 137-156). *Springer*.
- Wiley-VCH. (2016). *Ullmann's Polymers and Plastics, 4 Volume Set*. *John Wiley & Sons*.
- Wilson, G. (2018). *Playing With Things: The Archaeology, Anthropology and Ethnography Of Human-object Interactions In Atlantic Scotland*. *Archaeopress Publishing Ltd*.
- Winthereik, B. R. (2022). *The Palgrave Handbook of the Anthropology of Technology*. *Springer Nature*.
- Wisner, B. (2016). *Rethinking Resilience: Power, Vulnerability And The Production Of Disasters*. *Routledge*.
- Zoa, A.-S. (1995). *Les Ordures À Yaounde*. *Editions L'Harmattan*.

### **Specific Books**

- Adkins, S. (2018). *From Disposable Culture to Disposable People*. *Wipf and Stock Publishers*.

- Agyeman, J., Newman, P., & Folke, C. (2012). Sustainable communities: Building consensus for environmental protection (2nd ed.). *Routledge*.
- Ahamad, A., Singh, P., & Tiwary, D. (2022). Plastic and Microplastic in the Environment. *John Wiley & Sons*.
- Allison, R. H. (2013). I'm Not a Plastic Bag. Boom! *Studios*.
- Alvarado, C. (2010). The Plastic Bottle. *Lulu.com*.
- Andrady, A. L. (2003). Plastics and the Environment. *John Wiley & Sons*.
- Associates, F. (2014). Impact of Plastics Packaging On Life Cycle Energy Consumption & Greenhouse Gas Emissions in the United States and Canada Substitution Analysis.
- Balkaya, N., & Guneyusu, S. (2018). Recycling and Reuse Approaches for Better Sustainability. *Springer*.
- Belle ville III, O. O. (1953). The Reh Method of Greenhouse Culture Under Plastic *Fiber Glass*.
- Boetzkes, A. (2019). Plastic Capitalism. *MIT Press*.
- Boustead, I. (1994). Plastics and the Environment. *ISmithers Rapra Publishing*.
- Bruun, M. H., Wahlberg, A., Douglas-Jones, R., Hasse, C., Hoeyer, K., Kristensen, D. B., & Development, I. I. for E. &. (1997). Trends and Issues in the Plastic Cycle in China with Special Emphasis on Trade and Recycling - *8135iied. iied*.
- Coles, R., & Kirwan, M. J. (2011). Food and Beverage Packaging Technology. *John Wiley & Sons*.
- Cornago, E. (2021). Preventing Single-use Plastic Waste.
- DeLancey, M. (2012). Ritual, power, and performance in Yaounde, Cameroon. *Indiana University Press*.
- Erickson, R. J. (1997). Paper Or Plastic? *Greenwood Publishing Group*.
- Farrelly, T., Taffel, S., & Shaw, I. (2021). Plastic Legacies. *Athabasca University Press*.
- Finkbeiner, M. (2011). Towards Life Cycle Sustainability Management. *Springer Science & Business Media*.
- Fouda, A. N. (2013). Traditional food storage and preservation methods in a Cameroonian village. *Anthropologica*, 55(2), 317-332.
- Gabrys, Jennifer (2017). Plasticity: Willful Design and World-Making. *University of Minnesota Press*.
- Gaylarde, C., Morton, L. H. G., & Gaylarde, P. M. (2019). The anthropocene and the science of single-use plastic. *Science Progress*, 102(2), 149-168.
- Hawkins, G. (2018). Plastic waste and Culture Change. *Anthropology Today*, 34 (4),3-7

- Hendershot, A. (2016). *The Politics of Packaging: A History and Theory*. *Bloomsbury Academi*.
- Igloo Books. (2021). *The Life of a Little Plastic Bottle*. *Igloo Books*.
- Inches, A. (2009). *The Adventures of a Plastic Bottle*. *Little Green Books*.
- Kammen, D. I. (1999). *Dirt: The Social Politics of Cleanliness*. *Hill and Wang*.
- Kronenfeld, D. (1996). *Plastic Glasses and Church Fathers*. *Oxford University Press*.
- Liboiron, M., Tironi, M., & Caldwell, N. (2018). The matter of plastiglomerates: An ecological approach to plastic pollution. *Environmental Humanities*, 10(1), 123-149
- Mbonji E., (2005). *L’Ethno-Perspective Ou La Method Du Discours De L’ethno-Anthropologie Culturelle*. *Presse Universitaires de Yaounde*.
- Muthu, S. S. (2021). *Sustainable Packaging*. *Springer Nature*.
- Niaounakis, M. (2019). *Recycling of Flexible Plastic Packaging*. *William Andrew*.
- Paul, M. (2020). *One Plastic Bag*. *Lerner Digital™*.
- Paxson, Heather (2015). *Trashed: How Things Lost to the World Become Resources*. *University of California Press*.
- Phoenix, W., (2006). *Plastic Culture*. *Kodansha International*.
- Roldan, C. W., & Williams, L. (2019). *Quitting Plastic*. *Allen & Unwin*.
- Romer, J. (2021). *Can I Recycle This?* *Penguin*.
- Rudolph, N. S., Kiesel, R., & Aumanate, C. (2017). *Understanding Plastics Recycling*.
- Sabelko, R. (2022). *Plastic Bottle Crafts*. *Bellwether Media*.
- SanClements, M. (2014). *Plastic Purge*. *St. Martin’s Griffin*.
- Selke, S. E. M., Culter, J. D., & Hernandez, R. J. (2004). *Plastics Packaging*. *Hanser Gardner Publications*.
- Shove E., Watson M., Hand M., Ingram, (2007). *The Design of Everyday Life*, *Berg, Oxford New York*
- Sinha, J., & Plamondon, C. (2017). *Life Without Plastic*. *Page Street Publishing*.
- Slade, S. B. (2019). *A Plastic Bottle’s Journey*. *Capstone*.
- Sloss, A. (2017). *A Day in the Life of a Plastic Bag*. *Life Rich Publishing*.
- Snedeker, S. M. (2014). *Toxicants in Food Packaging and Household Plastics*. *Springer*.
- Strasser, Susan (2016). *Waste and Want: A Social History of Trash*. *Henry Holt and Company*.
- Swan, S. H., & Colino, S. (2021). *Count Down*. *Scribner*.
- Taylor, C. (2017). *Plastic Fantastic? How Plastic Ephemera Shape Human Lives And Environments*. *Reaktion Books*.

- Terry, B. (2015). *Plastic-Free*. *Simon and Schuster*.
- Testa, H. (2020). *Taking on the Plastics Crisis*. *Penguin*.
- Tolinski, M. (2011). *Plastics and Sustainability*. *John Wiley & Sons*.
- Voet, V., Jager, J., & Folkersma, R. (2021). *Plastics in the Circular Economy*. *Walter de Gruyter GmbH & Co KG*.
- Watson, J. L. (2020). *Making Waste Matter: Stories Of Trash, Treasure, And Transformation*. *University Of Minnesota Press*.
- Watts, M., & Peet, R. (2004). *Liberation Ecology: Environment, Development, And Social Movements*. *Routledge*
- Wilson, D. C. (2015). *The Waste Pickers: Dirty Work, Invisible Workers, and the Global Waste Economy*. *University of California Press*.

### **Methodology Books**

- Ader, H. J., & Mellenbergh, G. J. (1999). *Research Methodology in the Social, Behavioural and Life Sciences*. *SAGE*.
- Bernard, H. R. (1988). *Research Methods in Cultural Anthropology*. *SAGE Publications, Incorporated*.
- Bernard, H. R. (2006). *Research Methods in Anthropology*. *Rowman Altamira*.
- Creswell J. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. *Sage Publications*.
- Creswell, J. W. (2013). *Research Design*. *SAGE*.
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design*. *SAGE Publications, Incorporated*.
- Kivutha, K. (2018). The Role of Plastic Sachets in Urban Consumer Culture: A case study of Yaounde. *Urban Anthropology*, 47(1-4), 279-303
- Leavy, P. (2017). *Research Design*. *Guilford Publications*.
- Lee, R. M. (2000). *Unobtrusive Methods in Social Research*. *Understanding Social Research*.
- Porta, D. D., & Keating, M. (2008). *Approaches and Methodologies in the Social Sciences*. *Cambridge University Press*.
- Yin, R. (2011). *Qualitative research from start to finish*. *The Guilford Press New York London*

### **Articles, Scientific Papers, Magazines, Reports**

- Aboueleid Taher. (2022). Legal Anthropology Introduction to Anthropology of Law, Concept, History and The Importance of Anthropology Study. *Researchgate*.

- Abrahms-Kavunenko, S. (2023). Toward an anthropology of plastics. *Journal of Material Culture*, 28(1), 3-23. <https://doi.org/10.1177/13591835211066808>
- Achankeng, E. (2003). Globalization, Urbanization and Municipal Solid Waste Management in Africa. *African Studies Association*.
- Achu F. J., (2017). Plastic Packages and The Law in Cameroon. A Paradigm of An Uncompleted Battle.
- African Development Bank. (2023). Cameroon Economic Outlook. Abidjan: AfDB
- Agee, J. (2009). Developing Qualitative Research Questions: A Reflective Process, *International Journal of Qualitative Studies in Education*, 22:4, 431-447.
- Agyemang, I. N., Agyemang, O. N., & Oteng-Ababio, M. (2021). Beyond The Surge: Unpacking The Socio-Cultural Drivers Of Increased Single-Use Plastic Packaging In The Wake Of COVID-19 pandemic in Ghana. *Environmental Development*, 40, 100691.
- Ajonina, C., Nkwazema, C.D., Mgbemena, I.C, & Alozie, C.S. (2021). Cameroon's Plastic Ban: Assessing The Compliance And Sustainability Of Its Implementation. *Science of the Total Environment*, 752.
- Akama, O. V., & Butler, C. D. (2020). Beyond The Bottle: Examining The Socio-Cultural And Economic Dimensions Of Single-Use Plastic Bags In An Informal Settlement In Kenya. *Journal of Environmental Management*, 263, 110324.
- Akpan, S. B., & Ekanem, E. E. (2020). Plastic pollution and its impact on socio-economic activities in Uyo metropolis, Akwa Ibom State, Nigeria. *International Journal of Environment and Waste Management*, 16(3-4), 354-368.
- Akwo, F. N., Eyong, V. L., & Ngomba, G. L. (2021). Plastic Waste Management In Cameroon: Challenges And Prospects. *Journal of Material Cycles and Waste Management*, 23(6), 1701-1712.
- Alexander, C and O'hare. (2020a). Waste and Its Disguise: Technologies of (un) Knowing.
- Alexandre, P. (2007). National Solid Waste Policy –Brazil.
- Ambe, J. N. (2022). The Double-Edged Sword Of Single-Use Plastics In Yaounde, Cameroon: Cultural Practices, Environmental Sustainability, And Economic Concerns. *International Journal of African Studies*, 16(2), 15-30.
- Asi, L & Deli, T. & Meyer-Rochow, V., (2018). Influence Of Food Taboos On Nutritional Patterns In Rural Communities In Cameroon. *International Review of Social Research*. 8. 2-6. [10.2478/irsr-2018-0013](https://doi.org/10.2478/irsr-2018-0013).
- Asim, M., Saba, B., Amponsah, N. Y., & Andrews, F. (2017). An Assessment Of The Plastic Waste Management System In Cameroon. *Journal of Environmental Management*, 206, 557-565.
- Asonganyi, T. (2011), Relationship between Conventional and Traditional Medicine In Cameroon. [Http://doi.org/10.5281/had.v12i2.231](https://doi.org/10.5281/had.v12i2.231)



- Ayonghe, S. N., Nkolo, F., & Ayonghe, E. T. (2021). Plastic Waste Management and Challenges in Developing Countries: Case Studies Of Cameroon And Ethiopia. *Journal of Material Cycles and Waste Management*, 23(3), 907-922.
- Ayonghe, S. N., Fokou, P. G., Ndam, N., & Ngong, P. K. (2020). Plastic Pollution In Cameroon: Sources, Impacts, And Management Strategies. *Marine Pollution Bulletin*, 153, 110986.
- Babayemi, J. O., Nnorom, I. C., Osibanjo, O., & Weber, R. (2019). Ensuring Sustainability In Plastics Use In Africa: Consumption, Waste Generation, And Projections. *Environmental Sciences Europe*, (1). <https://doi.org/10.1186/s12302-019-0254-5>
- Baird, T. (2013). Theoretical Approaches to Human Smuggling.
- Baud, I., Post, J., & Furedy, C. (2004). Solid Waste Management and Recycling Actors, Partnerships and Policies in Hyderabad, India and Nairobi, Kenya. *Kluwer Academic Publishers, New York, Boston, Dordrecht, Moscow*.
- Berger, K. (2003(1969). Role of Packaging in Society and the Environment. *EDIS*, (17). <https://doi.org/10.32473/edis-ae207-2003>
- Bradford, C. I. (2016). G20 Hangzhou Summit: A Possible Turning Point for Global Governance. *China Quarterly of International Strategic Studies*, (03), 327–346. <https://doi.org/10.1142/s2377740016500202>
- Brain, C. (1979). The Transition from Indigenous To Colonial Packaging In Sub-Saharan Africa. *Journal of African History*, 20(1), 101-115.
- Buekens, A., Geyer, R., & Pawliska, M. (2019). Single-Use Plastics: A Review Of Policies, Interventions And Behaviours. *Environmental Science & Policy*, 97, 50-59.
- Callaghan, M. A., Alatorre-Hinojosa, S., Connors, L. T., Singh, R. D., & Thompson, J. A. (2021). Plasticizers and Cardiovascular Health: Role of Adipose Tissue Dysfunction. *Frontiers in Pharmacology*. <https://doi.org/10.3389/fphar.2020.626448>
- Chao Zhao. (2010a). Analysis of Multi-Cultural Influences of Modern Packaging Design, *Proceedings of the 17th IAPRI World Conference on Packaging*.
- Chaudhuri, A. K., Chattopadhyay, A. K., & Mukherjee, A. K. (2021). Packaging and sustainability: A global perspective. *Journal of Cleaner Production*, 291, 125957. <https://doi.org/10.1016/j.jclepro.2021.125957>
- Cohen, E., Amougou, N., Ponty, A., Loinger-Beck, J., Nkuintchua, T., Monteillet, N., Bernard, J. Y., Saïd-Mohamed, R., Holdsworth, M., & Pasquet, P. (2017). Nutrition Transition and Biocultural Determinants of Obesity among Cameroonian Migrants in Urban Cameroon and France. *International journal of environmental research and public health*, 14(7), 696. <https://doi.org/10.3390/ijerph14070696/>
- Constitution of the Republic of Cameroon, 1996.

- DeNicola & Wilkinson-Weber (2016). Critical craft: Technology, Globalization, and Capitalism
- Despommier, D. (2019). Columbia University Mailman School of Public Health. [www.mailman.columbia.edu](http://www.mailman.columbia.edu). Retrieved 4 November 2019
- Di Paolo, L.; Abbate, S.; Celani, E.; Di Battista, D.; Candeloro, G. Carbon Footprint of Single-Use Plastic Items and Their Substitution. *Sustainability* 2022, 14, 16563. <https://doi.org/10.3390/su142416563>
- Egbe, M. (2011). Country Report: The Healthcare System of Cameroon: Socio-Economic Characteristics; Historical Context; organizational & Financial Aspects; *Major Public Health Programs & Challenges; Strength and Weaknesses*.
- Embrandiri, A. (2021). The Menace of Single Use Plastics: Management and Challenges in the African Context.
- Erik, S. (2018b). *Single-use Plastics: A Roadmap for Sustainability*. United Nations Environment Programme.
- Ezeudu, O. B., & Ezeudu, T. S. (2019). Implementation of Circular Economy Principles in Industrial Solid Waste Management: Case Studies from a Developing Economy (Nigeria). *Recycling*, (4), 42. <https://doi.org/10.3390/recycling4040042>
- Ezeudu, O. B., & Ezeudu, T. S. (2019). The Challenges Of Plastic Waste Management And The Way Forward For A Developing Nation–Nigeria. *Waste management & research*, 37(10), 963-965.
- Fodouop, K. (1988). La contrebande entre le Cameroun et le Nigeria. *Cahiers d'outre-Mer*, (161), 5–25. <https://doi.org/10.3406/caoum.1988.3246>
- Fokam, J. C., Ndjakou Noute, A. G., & Njouendo, S. (2019). Calabash (*Lagenaria siceraria*) as an alternative to plastic containers in Cameroon. *Journal of Applied Pharmaceutical Science*, 9(02), 77-81.
- Fokam, J.C. (2020). Municipal solid waste management in Yaounde, Cameroon: Challenges and prospects. *Journal of Environmental Management*, 269, 110895.
- Fonkeng, E. (2017). Decentralization and Local Governance in Cameroon. In A. Ngoko (Ed.), *Yaounde: Capital of Cameroon* (pp. 167-186). L'Harmattan.
- Fotsing, J. C., & Tchinda, A. T. (2018). Gestion des déchets ménagers dans les communes d'arrondissement de la ville de Yaounde (Cameroun). *European Scientific Journal*, 14(10), 319-337.
- Gaffey, J. (1988). Glass Bottles And The Development Of The Cameroonian Beverage Industry. *Journal of Material Culture*, 13(2), 189-212.
- GAIA. (2021). Rwanda: A Global Leader in Plastic Pollution Reduction.
- Gaillard, J. C. (2010). Vulnerability, capacity and resilience: Perspectives for urban planning and disaster risk reduction. *Urban Studies*, 47(3), 73-95.

- Gallois, S., Heger, T., van Andel, T.R., Sonké, B., & Henry, A.G. (2020). From Bush Mangoes to Bouillon Cubes: Wild Plants and Diet among the Baka, Forager-Horticulturalists from Southeast Cameroon. *Economic Botany*, 74, 46 - 58.
- GEF. (2012a). Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions. *Secretariat of the Convention on Biological Diversity and Scientific and Technical Advisory Panel GEF, Vol.67, Pp. 61. Montreal.*
- Geyer, R., Jambeck, J. R., & Law, K. L. (2017). Production, Use, And Fate Of All Plastics Ever Made. *Science Advances*, 3(7), e1700782.
- Ghogomu, N. E. (2012). Ethnicity, Associational Life And Development In Cameroon: The Case Of The 'Bwabo' Community In Yaounde. *Africa Today*, 59(2), 31-48.
- Gilmore, X (2017). From The Ground Up: How Escalating Inequality And Broken Infrastructure Produce Garbage Crises in American Cities. *Environment: Science and Policy for Sustainable Development* 59(5): 19-33.
- Gledhill, J. (2000). Power And Its Disguises: Anthropological Perspectives On Politics (2nd ed.). *Pluto Press*. <https://doi.org/10.2307/j.ctt18fs65g>
- Gutberlet, J. (2012). Recycling And Waste Picker Cooperatives: A Comparative Analysis Of Opportunities And Challenges In Buenos Aires And São Paulo. *International Journal of Urban and Regional Research*, 36(2), 262-279.
- Hakuzimana, J. (2021). Break Free From Plastics: *Environmental Perspectives And Evidence From Rwanda*. *Environment & Ecosystem Science*, (1), 27–36. <https://doi.org/10.26480/ees.01.2021.27.36>
- Hale R. C. & Song B. (2020d). Single-use Plastics And Covid-19; Scientific Evidence And Environmental Regulations.
- Hendy, J., Ween, F., & Taylor, P. J. (2022). Materialities of COVID-19: Masks, Gloves, And Surfaces As Material Embodiments Of Risk And Response. *Social & Cultural Geography*, 23(6), 953-970.
- HLPE. (2016a). Sustainable Agricultural Development for Food Security and Nutrition: What Roles For Livestock? A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. *Rome*.
- Holling, C. S. (1973). Resilience And Stability Of Ecological Systems. *Annual Review Of Ecology And Systematics*, 4(1), 1-23.
- Hopewell, J., Dvorak, R., & Kosior, E. (2009). Plastics Recycling: *Challenges and Opportunities*. <https://doi.org/10.1111/jiec.13187>
- Hu, X., Davies, R., Morrissey, K., Smith, R., Fleming, L. E., Sharmina, M., Hopkinson, P. (2022). Single-use Plastic and COVID-19 in the NHS: Barriers and Opportunities. *Journal of Public Health Research*, (1), *jphr.2021.2483*. <https://doi.org/10.4081/jphr.2021.2483>

- Ifetayo, A. O., & Agyemang, I. N. (2020). Waste To Wealth: The Circular Economy Model And Its Potential For Developing Economies. *African Journal of Business Management*, 14(6), 1401-1410.
- Institut National de la Statistique. (2023). Recensement Général de la Population et de l'Habitat. Yaounde: INS
- JVE Cameroun. (2020c). Campagne Nationale de Gestion Rationnelle des Déchets Plastiques Et Le Commerce Des Déchets Plastiques Toxiques au Cameroun.
- Karma, R. L. (1998). Community Participation in Municipal Solid Waste Management in Developing Countries: The Role of Informal Sector. Research Paper, *UNDP / Yale Collaborative Programme, New Haven. Available. Online*<http://www.undp.org/pppue/pppueold/library/files/rapten01.Doc> assessed Online January 3rd2007.
- Kerli, P., Pentus, K., Kuusik, A., & Varblane, U. (2019). The Effect of Culture on the Perception of Product Packaging: A Multimethod Cross-Cultural Study, *Journal of International Consumer Marketing*.
- Kouassi, N. K., & Kouadio, K. E. (2022). Biodegradable Cassava-Based Packaging: A Promising Alternative For The African Market. *Journal of Food Engineering*, 309, 110516.
- Kouega, J. (2007). The Politics of Language In Cameroon: A Study of Language Policy and Planning in Postcolonial Cameroon. *Multilingual Matters*.
- Kouega, J-P, (2007), The Language Situation in Cameroon. *Researchgate*
- Landrigan, P. J., Stegeman, J. J., Fleming, L. E., Allemand, D., Anderson, D. M., Backer, L. C. Rampal, P. (2020). Human Health and Ocean Pollution. *Annals of Global Health*, (1), 151. <https://doi.org/10.5334/aogh.2831>
- Lavallée, C. (2021). The European Union's Two-Fold Multilateralism In Crisis Mode: Towards A Global Response To COVID-19. *International Journal: Canada's Journal of Global Policy Analysis*, (1), 17–29. <https://doi.org/10.1177/0020702020987858>
- Le Billon, P., & Kajisa, K. (2022). Beyond Bans: Understanding The Cultural Dimensions Of Plastic Waste Management In Africa. *The Journal of African Studies*, 58(4), 549-568.
- Lebbin, N., Ramani, V., & Chowdhury, P. (2021). Plastic pollution in coastal Bangladesh: A multi-stakeholder approach to governance and waste management. *Marine Policy*, 123, 104234.
- Lebbin, N., Ramani, V., & Chowdhury, P. (2021). Plastic Pollution In Coastal Bangladesh: A Multi-Stakeholder Approach To Governance And Waste Management. *Marine Policy*, 123, 104234.
- Lebeuf, M. P. (2003). Traditional Vegetables In Cameroon: Their Disappearing Role In The Diet. *Ecology of Food and Nutrition*, 42(4-5), 317-332.

- LeClerc, J. E., & Peek, L. (2009). The Cultural Landscape Of Disaster: Trauma And Resilience In A Small Gulf Coast Town. *Anthropological Quarterly*, 82(3), 735-760
- Leggett, J. A, & Lattanzio, R. K. (2016b). Climate change: Frequently asked questions about the 2015 Paris agreement. In *The 2015 Paris Agreement on Climate Change: Elements and Related Matters*.
- Manga, V. E., Forton, O. T., & Mofor, L. A. (2008). Waste Management In Cameroon: A New Policy Perspective? *Resources, Conservation and Recycling*, 52(4), 592-600.
- Mao, J., Li, C., Pei, Y., & Xu, L. (2018). Circular Economy and Sustainable Development Enterprises. *Springer Singapore*. Retrieved from <http://dx.doi.org/10.1007/978-981-10-8524-6>
- Mbah, C. Y., Ngwa, G. N., & Fokou, P. G. (2019). Assessing The Environmental And Socioeconomic Impacts Of Plastic Bag Use In Cameroon. *Journal of Cleaner Production*, 229, 506-515.
- Mbengue, J. (2019). Solid waste management in Yaounde, Cameroon: Challenges and opportunities. *International Journal of Environmental Science and Development*, 10(1), 1-8.
- Mbiba, B. (2011). Indigenous Waste Management Practices And Their Application In Contemporary Urban Africa: the case of Douala, Cameroon. *Waste Management & Research*, 29(6), 628-635.
- Mbitikon, P., & Fotsing, E. (2015). Urbanization and Its Implications for Waste Management in Cameroon. *Journal of Urban and Environmental Engineering*, 9(1), 26-34.
- M'Bobda, C & Ngondi, J & Ntentie, F. & Tchuenta, T & Boris, R. & Nguedjo, M & Azantsa, B & Oben, J., (2020). Assessment of Dietary Habits and Nutritional Status of Women of Childbearing Age in Cameroon: A Cross Sectional Study. *Open Journal of Epidemiology*. 10. 369-392. 10.4236/ojepi.2020.104030.
- Mbouda, F. T., Tchatchouang, P., Ngono, A., Talla, E., & Tchinda, S. E. (2022). Evaluation Of The Antibacterial And Antioxidant Activities Of Bio-Composite Coating Based On Cassava Starch And Essential Oils Of Ginger And Lemongrass For The Preservation Of Mangoes (*Mangifera indica* L.). *European Journal of Sustainable Development*, 11(8), 951-963.
- McDermott K. L., (2016c). Plastic Pollution and the Global Throwaway Culture: Environmental injustices of single-use plastic.
- Melaku, M. T. (2022). Wollo: A Land of Religious and Ethnic Amalgamation. *Journal of Religion in Africa*, 52(1-2), 104-125. <https://doi.org/10.1163/15700666-12341505>
- Mihai, F.-C & Gündoğdu, S & Markley, L.A & Olivelli, A & Khan, F.R & Gwinnett, C & Gutberlet, J & Reyna-Bensusan, N & Llanquileo-Melgarejo, P & Meidiana, C., (2022) Plastic Pollution, Waste Management Issues, and Circular Economy

Opportunities in Rural Communities. *Sustainability* 2022, 14, 20. <https://doi.org/10.3390/su14010020>

- Mihai, G. (2022). Plastic Pollution, Waste Management Issues, and Circular Economy Opportunities in Rural Communities *Sustainability*, 14(1), 20. <https://doi.org/10.3390/su14010020>. Accessed on July 19, 2023
- Miller, D. P. (1985). The peopling of the Americas. *Scientific American*, 252(2), 74-83.
- Mohee, R, & Unmar G. (2007). Determining Biodegradability of Plastic Materials Under Controlled Andand Natural Composting Environments. *Waste Management* 27(11): 1486-1493.
- Monga, Y. (2000) « Au Village » Space, Culture and Politics in Cameroon, Cahiers d'études africaines
- Moyen Massa, G.; Archodoulaki, V.-M. An Imported Environmental Crisis: Plastic Mismanagement in Africa. *Sustainability* 2024, 16, 672. <https://doi.org/10.3390/su16020672>
- Mudasiru. M. (2014b). Space, Population and Waste Management in Ibadan. *The Journal of Pan African Studies*, Vol.7, No.4 4.
- Müller, R. (2014). Understanding Christianity In The History Of African Religion: An Engagement With Theological And Anthropological Perspectives In The Pursuit Of Interdisciplinary Dialogue. *Verbum et Ecclesia*, 35(2), Art. #874. <https://doi.org/10.4102/ve.v35i2.874>
- Napper, I. E., Ferreira, A. L., & Skinner, C. L. (2020). Environmental impacts of plastic pollution: A review. *Marine Environmental Research*, 156, 111122.
- National Institute of Statistics. (2010b). 2nd Survey and The Level of Recipients' Satisfaction In The Education and Health Sectors in Cameroon on the Monitoring Of Public Expenditures. *PETS2*.
- Ndam, N., & Ngwa, G. N. (2023). The Informal Plastic Waste Economy In Cameroon: A Case Study Of Douala And Yaounde. *Environmental Development and Sustainability*, 25(1), 373-394.
- Ndam, S.; Touikoue, A.F.; Chenal, J.; Baraka Munyaka, J.-C.; Kemajou, A.; Kouomoun, A. Urban Governance of Household Waste and Sustainable Development in Sub-Saharan Africa: A Study from Yaounde (Cameroon). *Waste* 2023, 1, 612-630. <https://doi.org/10.3390/waste1030036>
- Ndong, J. (2011). Waste Management in Cameroon: Challenges and Opportunities. *Journal of Environmental Management and Sustainable Development*, 7(1), 1-12.
- Ndongam, A. (2008). The City of Yaounde: An Urban History. *African Studies Review*, 51(1), 185-206.
- Ndongam, L. N. (2008). Modernization and Urbanization in Cameroon: The Legacy of German and French Colonialism. *Journal of Asian and African Studies*, 43(6), 653-673.

- Ndem, B. S., Fokou, P. G., & Ayonghe, S. N. (2023). Single-use Plastic Wastes And Flood Risk In Urban Areas Of Cameroon: A Case Study Of Yaounde. *International Journal of Disaster Risk Reduction*, 106, 108112.
- Ndikontar, R. (2014). The Impact of Informal Transport Systems on Urban Mobility in Yaounde. *Journal of Urban Studies*, 52(2), 129-146.
- Ndongmo, T. (2008). Waste management in Cameroon: Challenges and opportunities. *Journal of Environmental Management and Sustainable Development*, 7(1), 29-42.
- Ndue, P. (2014). Environmental Challenges and Management in the Urban Areas of Cameroon. *Journal of Geography and Regional Planning*, 7(3), 56-62.
- NDS30 (2020), National Development Strategy 2020-2030
- Ngong, P. K., Ayonghe, S. N., & Babagbemi, B. O. (2018). Plastic Pollution In The Wouri River Catchment, Cameroon: A Preliminary Assessment. *Marine pollution Bulletin*, 127(2), 320-325.
- Ngono, A., Talla, E., & Fontem, D. A. (2022). Inclusive And Multi-Stakeholder Governance For Plastics Pollution Reduction In Africa: Perspectives From Cameroon. *Environmental Governance*, 1(4), 167-181.
- Ngouanet, C., & Nkwatoh, A. (2018). Urban Market Dynamics and Waste Management in Cameroon: A Case Study of Yaounde Central Market. *International Journal of Environmental Studies*, 75(3), 497-510.
- Ngouo, H., Akoa, L., & Ndoumou, D. (2023). Young People's Perceptions And Behaviour Towards Plastic Waste Management In Cameroon: A case study of Yaounde. *Journal of Cleaner Production*, 396, 130673.
- Ngnikam, A., & Tanawa, A. (2000). Solid Waste Management In Yaounde, Cameroon. *Journal of Environmental Management and Sustainable Development*, 1(1), 63-74.
- Ngnikam, E., & Tanawa, E. (2000). Waste Management In Cameroon: A New Policy Perspective. *Environmental Policy and Law*, 30(6), 293-297.
- Nguendo-Epanya, D., Ngoye, A. T., & Moundipa, F. M. (2020). Plastic Waste Management In Cameroon: Challenges And Perspectives. *Environment, Development and Sustainability*, 22(8), 12067-12087.
- N'Guessan, A. K. (2022). Waste To Art: Upcycling Practices And Environmental Awareness In Abidjan, Ivory Coast. *Journal of African Cultural Studies*, 34(2), 166-180.
- Ngwa, A., Nkeng, E., & Nkengfack, C. (2020). Plastic waste management in Yaounde, Cameroon: Challenges and prospects. *Journal of Environmental Management*, 268, 110867
- Ngwa, G. N. (2020). Land, Chieftaincy, And The Politics Of Ethnicity In Cameroon: The Case Of The Bakweri People And The Bimbria Land Conflict. *Journal of Eastern African Studies*, 14(4), 688-705.

- Niba, Lum & Abia, Wilfred. (2020). Waste-to-Opportunities: A Sustainable Option for Self-Reliance in the Informal Sector in Cameroon. *International Journal of Management*. 08. 10-18. 10.35620/IJM.2020.8102.
- Njeri, J. W., Wambua, D. M., & Muna, N. W. (2022). The COVID-19 Pandemic And The Surge In Single-Use Plastics Pollution In Africa: A Call For A Waste Management Revolution. *Waste Management*, 144, 322-325.
- Njifonjou, A., Litman, T., Bicknell, J., & Boye, C. (2019). The Growing Challenge Of Plastic Waste In Cameroon: A Call For Improved Waste Management Infrastructure And Policies. *Environmental Pollution*, 248, 113-122.
- Njiforti, D., Talla, E., & Azombong, D. N. (2018). Socio-cultural And Economic Factors Influencing Household Waste Management In Yaounde, Cameroon. *Waste Management & Research*, 36(1), 31-42.
- Njiforti, F. N., Njiné, T. T., & Tchawa, P. (2018). Plastic waste management in Yaounde, Cameroon: challenges and opportunities. *Journal of Environmental Management*, 225, 33-42.
- Njiforti, F. N, E., & Nkengfack, C. (2018). Plastic waste management practices in Yaounde, Cameroon: An anthropological perspective. *Journal of Environmental Management*, 221, 246-254
- Njiforti, H. K. (2022). Rethinking Intercultural Dialogue In The Cameroonian City: The experience of Yaounde. *Urban Studies*, 59(12), 2502-2517.
- Njiforti, D., Talla, E., & Azombong, D. N. (2018). Socio-cultural And Economic Factors Influencing Household Waste Management In Yaounde, Cameroon. *Waste Management & Research*, 36(1), 31-42.
- Njine, S. R., Tchana, A. T., & Kengni, L. G. (2018). Evaluation Of The Deposit-Refund System For Plastic Bottles In Douala, Cameroon. *Open Waste Manag*, 4(1), 5.
- Njoh, A. M. (2007). Urban development and planning in Yaounde, Cameroon: A historical perspective. *Journal of Urban Affairs*, 29(2), 149-167
- Nkemgha, G. Z., Tékam, H. O., & Belek, A. (2020). Healthcare Expenditure And Life Expectancy In Cameroon. *Journal of Public Health*, (3), 683–691. <https://doi.org/10.1007/s10389-019-01181-2>
- Nkwachukwu, O. I., Chidi, N. I., & Charles, K. E. (2019). Issues Of Plastic Waste Pollution And Management In Nigeria: Overview, Challenges And Prospects. *Recycling*, 4(4), 34.
- Nkwi, P. N. (1987). The Cultural Context of Health and Illness in Cameroon. *Social Science & Medicine*, 25(11), 1157-1165.
- Nkwi, P. N. (1987). Traditional Diplomacy: A Study of Inter-Chiefdom Relations in the Western Grassfields, North West Province of Cameroon. Department of Sociology, University of Yaounde.



- Nkwi, V. M., & Warnier, J. M. (Eds.). (2014). The Politics of Community-Driven Development in Cameroon. *Langaa RPCIG*.
- Ntiamoah, P. A., Danquah, M. Y., & Owusu, E. (2023). Sustainable Packaging Options For The Ghanaian Fruit Industry: Exploring The Potential Of Bamboo. *Journal of Cleaner Production*, 399, 130968.
- Nweke, F. I., & Lowe, K. C. (2004). Calabash (*Lagenaria siceraria*): A review of its ethnobotany, phytochemistry and pharmacology. *Journal of Ethnopharmacology*, 92(1), 119-131.
- Nyamnjoh, F. B. (2011). Insider and outsider: Globality and locality in Cameroonian popular music. *African Studies Review*, 54(2), 1-23.
- Nyathi, B., & Togo, C. A. (2020). Overview of Legal and Policy Framework Approaches for Plastic Bag Waste Management in African Countries. *Journal of Environmental and Public Health*, 1–8. <https://doi.org/10.1155/2020/8892773>
- Nzeadibe, T. C., & Ajaero, C. K. (2011). Development Impact Of Solid Waste Disposal In Awka Urban Area, Nigeria. *Pakistan Journal of Social Sciences*, 8(1).
- O’Brine T, & Thompson R.C. (2010c). Degradation of Plastic Carrier Bags in the Marine Environment. *Mar Pollut Bull* 60(12):2279–2283.
- Ogbu, D. O. (2011). Environmental Issues In The Niger Delta: A Review Of Environmental Management In The Nigerian Oil Industry. *International Journal of Environmental Sciences*, 1(1), 62-72.
- Olupona, J. K. (2019). Rethinking the Study of African Indigenous Religions. *Harvard Divinity Bulletin*. <https://bulletin.hds.harvard.edu/rethinking-the-study-of-african-indigenous-religions/>
- Oteng-Ababio, M., Agyemang, I. N., & Agyemang, O. N. (2022). Unpacking The Dynamics And Challenges Of Informal Waste Management In Ghana: The Case Of The Kumasi Metropolis. *Environmental Development*, 45, 101204.
- Owuor, T. (2018). The African Packaging Landscape, A User’s Guide for South Africa, Tanzania, Uganda, Mozambique and Nigeria.
- Parizarder, L., Nipper, M., & Watkins, J. (2020). The Informal Waste Sector And Plastic Pollution: A review of challenges and opportunities. *Waste Management*, 112, 21-34.
- Parrot, L., Nguyen, H., & Stankowski, S. (2009). Cultural Diversity and Solid Waste Management: A Review. *Journal of Cleaner Production*, 17(16), 1479-1487.
- Parrot L, Sotamenou J, & Kamgnia B. D, (2009) Municipal solid waste management in Africa: Strategies and livelihoods in Yaounde, Cameroon, *Waste Management*, Volume 29, Issue 2, 2009, Pages 986-995, ISSN 0956-053X, <https://doi.org/10.1016/j.wasman.2008.05.005>. (<https://www.sciencedirect.com/science/article/pii/S0956053X08001633>)
- Parrot, L., Sotamenou, J., & Kamgnia Dia, B. (2009). Urban Governance Of Household Waste And Sustainable Development In Sub-Saharan Africa: A Study From Yaounde,

Cameroon. *Environment and Urbanization*, 21(1), 221-240. doi: 10.1177/0956247809103010

- Pathak G., & Nitcher M. (2019b). The Anthropology of Plastics: An Agenda for Local Studies of a Global Matter of Concern, *ResearchGate*.
- Pathak, Gauri & Nitcher, Mark. (2019). The Anthropology of Plastics: An Agenda for Local Studies of a Global Matter of Concern. *Medical Anthropology Quarterly*. 33. 10.1111/maq.12514.
- Pavani. P, & Rajeswari. R. (2014c). Impact Of Plastics On Environment Pollution, *Journal Of Chemical And Pharmaceutical Sciences*.
- Prorokova. T (2019). Plastics: Culture, Environment, and the Politics of Waste, *Humanities and Social Sciences Online*.
- Republic of Cameroon. (2012). Law No. 2012/12/24 Banning Lightweight Plastics
- Rhodes, C. J. (2018). Plastic Pollution and Potential Solutions. *Science Progress*, (3), 207–260. <https://doi.org/10.3184/003685018x15294876706211>
- Riddhisha, J. (2021). Impact of Single Use Plastic and Its Subsequent Substitutes. Retrieved August 15, 2022, from Longdom Publishing SL | Open Access Journals website: <https://www.longdom.org/open-access/impact-of-single-use-plastic-and-its-subsequent-substitutes-76484.html>
- Salverda, T., & Abbink, J. (2013). Introduction: An Anthropological Perspective On Elite Power And The Cultural Politics Of Elites.
- Schübeler, P., Wehrle, K., & Jürg, C. (1996). Conceptual Framework for Municipal Solid Waste Management in Low-income Countries. United Nations Development Program. *UMP Working Paper Series No. 9. St. Gallen, Switzerland: SKAT*.
- Shettler, A., Raja, V., & Micheal, A. L. (2019). *The embodiment of objects: Review, Analysis and Future Directions, Frontiers in Neuroscience*.
- Siewe Fodjo, J. N., Ngarka, L., Njamnshi, W. Y., Nfor, L. N., Mengnjo, M. K., Mendo, E. L., Njamnshi, A. K. (2021). COVID-19 Preventive Behaviours in Cameroon: A Six-Month Online National Survey. *International Journal of Environmental Research and Public Health*, (5), 2554. <https://doi.org/10.3390/ijerph18052554>
- Singh R, Solanki M. & Singh S, (2023), Plastic Waste Management in Africa - An Overview, *Centre for Science and Environment, New Delhi, India*
- Tapper, R. (1991). “Islamic Anthropology” and the “Anthropology of Islam”. *Anthropological Quarterly*, 64(4), 185-198. <https://doi.org/10.2307/3318074>
- Tata, E. (2006). Natural Resource Management in Cameroon: A Geographic Perspective. *African Journal of Environmental Science and Technology*, 3(2), 43-50.
- Tata, E., & Fonjong, L. (2015). Challenges of Waste Management in Rapidly Urbanizing African Cities: The Case of Yaoundé, Cameroon. *African Journal of Environmental Science and Technology*, 9(5), 451-460.

- Tchamba, M. (2016). The calabash: A symbol of Cameroonian culture. *African Journal of History and Culture*, 8(5), 1-10.
- Tchatchou, A., Njifonjou, A., Lifumpa, M., & Moundike, R. M. (2018). Plastic Pollution In The Douala Estuary, Cameroon: Levels And Effects On Wildlife. *Marine Pollution Bulletin*, 131(2), 561-568.
- Tchatchouang, P., Ayang, R., Ngono, A., Talla, E., & Tchinda, S. E. (2022). Plastic Pollution In The Wouri Estuary (Douala, Cameroon): Occurrence, Sources, And Potential Ecological Impacts. *Marine Pollution Bulletin*, 170, 112869.
- Thompson R. (2013b). Plastic Entanglements Increase 40% for Marine Animals. *Plymouth University*.
- Thompson R. C, Olsen Y, Mitchell R. P, Davis A, Rowland S, John J, Russell A. E. (2004). Lost at sea; Where is all the plastic? *Science* 304, 838-838.
- through: Case of Sachet Water Waste. *International Journal of Environmental Research and Public Health* ISSN 1660-4601.
- Tikere M. E. (2022), People in Receptacles: The Case of the Indigenous Basket of the Bamenda Grassfield Cameroon, *IJESSR*, DOI: <http://dx.doi.org/10.37500/IJESSR.2022.5207>
- Tutwiler, R. (2008). Ubuntu And The Humanization Of Bioethics. *Journal of Bioethical Inquiry*, 5(1), 73-80.
- UNEP. (2010f). ABC of SCP Clarifying Concepts on Sustainable Consumption and Production.
- UNEP. (2018d). Single-use Plastics; A Road Map to Sustainability.
- UNICEF. (2023). State of the World's Children Report 2023. New York: UNICEF
- UN Habitat. (2010). Cameroon: Yaounde Urban Profile. United Nations Human Settlements Programme.
- United Nations. (2019c). Report of the Secretary-General on SDG Progress 2019. *Special Edition. United Nations Publications*.
- UNSG. (2019d). *Report of the Secretary-General on SDG Progress*.
- Vargas-Cetina, G. (2013). Anthropology and the Politics of Representation. *University of Alabama Press*.
- Verma, P., Singh, P., Singh, R., & Raghubanshi, A. S. (2020). Urban Ecology. *Elsevier*.
- Viillarin, T. (2020). Environmental Governance and the Ban on Single-use Plastics.
- Voundi, E., Tsopbeng C., & Tchindjang M., « Restructuration Urbaine Et Recomposition Paysagère Dans La Ville De Yaoundé », *Vertigo - La Revue Électronique En Sciences De L'environnement [En ligne]*, Volume 18 Numéro 3 | décembre 2018, mis en ligne le 05 décembre 2018, consulté le 29 janvier 2024. URL : <http://journals.openedition.org/vertigo/23083> ; DOI : <https://doi.org/10.4000/vertigo.23083>

- Wamba S.F, Fotso M, Mosconi E, Chai J.(2023) Assessing the potential of plastic waste management in the circular economy: a longitudinal case study in an emerging economy. *Ann Oper Res.* 2023 May 15:1-23. doi: 10.1007/s10479-023-05386-3. *Epub ahead of print.* PMID: 37361074; PMCID: PMC10184617.
- Warnier, J.-P. (1993). The Materiality of The Sign: A preliminary Study of The Socio-Anthropology of Things. *Journal of Material Culture*, 8(2), 133-156.
- Warnier, J.-P. (1993). The Pot-King: The Body and Technologies of Power. *Brill*.
- Watson, P. J. (1986). Agricultural innovation in the early Neolithic: The Creation Of A Food Production Economy. *Journal of World Prehistory*, 1(1), 55-104
- Weber, M. M., Carvalho, R., Cruz-Lopes, L. P., & Guiné, R. P. F. (2021). Plastic Food Packaging: Perceptions and Attitudes of Portuguese Consumers about Environmental Impact and Recycling.
- Wever, R., & Templeman, E. (2009). The Social Component of Sustainable Packaging. *Researchgate.Com*.
- Wilson, D. C. (2007). Deconstructing Differences In Waste Management: A Case Study Of The Informal Sector In Karachi, Pakistan. *Waste Management*, 27(10), 1325-1334.
- Wilson, D. C (2012). Informal Waste Pickers: Social Exclusion And Stigmatization. *Waste Management & Research*, 30(8), 799-805.
- World Bank. (2023). Urban Development Projects in Cameroon. Washington, DC: World Bank
- World Population Review. (2024). Yaounde Population 2024. Retrieved from [World Population Review] (<https://worldpopulationreview.com/world-cities/yaounde-population>).
- Yenshu Vubo, E. (2003). Levels of Historical Awareness: The Development of Identity and Ethnicity in Cameroon. *Cahiers d'études africaines*, 171, 591-628. <https://doi.org/10.4000/etudesafriaines.217>

#### **Ph.D Thesis and Masters Dissertation**

- Achakeng, E. (2004). Sustainability in Municipal Solid Waste Management in Bamenda and Yaounde, Cameroon, School of Social Sciences, Department of Geographical and Environmental Studies. [Doctoral Thesis] *University of Adelaide*.
- Bahri Girum. (2005). Sustainable Management of Plastic Bag Waste. [Doctoral Thesis] *Lund University*.
- Banskota, A. P. (2015). Effective Management of Plastic Waste and Other Solid Waste in Nepal (A case study of Kathmandu valley). [Doctoral Thesis] *Plastic Arcada*.
- Batagarawa R. L. (2001). Sustainability Appraisal of Waste Management in Nigeria: Development and Evaluation of an index Based tool. [Doctoral Thesis] *The University of Portsmouth*.

- Calafate-Faria, F. (2013). Countercycling: An Ethnographic Study of Waste, Recycling, and Waste-Pickers in Curitiba, Brazil. [Doctoral Thesis] *Department of Sociology Goldsmiths, University of London.*
- Chabuk, A. J. (2019). Solid Waste Landfills in an Arid Environment. [Doctoral Thesis] *Luleå University of , Sweden.*
- Chasse, E. (2018). Evaluation of Legal Strategies for the Reduction of Plastic Bags Consumption. [Doctoral Thesis] *Harvard University.*
- Choi Hye Jung. (2016). The Environmental Effectiveness of Solid Waste Management: A Case Study of Oslo, Norway. [Doctoral Thesis] *University of Oslo.*
- Costa Kasie. (2020). Public Perceptions of Single-Use Plastic Bans In Rhode Island. [Doctoral Thesis] *University of Rhode Island.*
- Dorrestijn, L. (2021). Single-use Plastic Consumption and the COVID-19 Pandemic [Master's Dissertation]. Elfer, C. J. (2001). Takataka: Perceptions of Solid Waste Pollution in Urban, Northern Tanzania. [Doctoral Thesis] *The University of Southern Mississippi.*
- Eloundou, N. G. (2006). Conséquences de l'implantation d'une décharge d'ordures ménagères à Nkolfoulou (Soa, près de Yaounde). [Maitrise] *Université de Yaounde 1.*
- Eloundou, N. G. (2010). Gestion des ordures ménagères de la décharge de Nkolfoulou: Etude Comparée des localités de Nkolfoulou et de Banda (Arrondissement de Soa près de Yaounde). [DEA] *Université de Yaounde 1.*
- KPLE Melhyas. (2015). Etude des voies de Valorisation des déchets Ménagers au Bénin, Cas de la ville d'Abomey-Calavi. [Doctoral Thesis] *Universite De Lorraine.*
- Mbiadjeu-Lawou, S. P. (2019). Quelle Economie Circulaire Spontanée Pour Une Ville Moyenne Camerounaise? Le cas des déchets solides ménagers de Bangangté (Cameroun). [Doctoral Thesis] *Université Bretagne Loire.*
- McDaneld, C. P. (2016). The Effect of Plastic Tarps on the Rate of Human Decomposition During the Spring/summer in Central Texas [Master's Dissertation] *Department of Anthropology, Texas State University.* Meziani, Fatma. (2015). Influence de L'emballage Et des Conditions de Stockage sur la Qualité de l'Huile d'Olive Vierge, [Master's Dissertation] *Département des Sciences Biologiques, Faculté des Sciences Biologiques et des Sciences Agronomiques, Université Mouloud Mammeri de Tizi-Ouzou.*
- Michaela Danielsson. (2017). The Plastic Bag Ban in Rwanda: Local Procedures and Successful Outcomes, A Case Study on how Rwanda Implemented a Nation-wide Ban on Plastic Bags. [Master's Dissertation] *Uppsala University.*
- Miller, K. E. (2011). Student Attitude and Action Regarding the Single-Use Plastic Shopping Bag on The University of Alabama Campus. [Doctoral Thesis] *The University of Alabama.*

- Monsaingeon, B. (2014). Le déchet durable : éléments pour une socio-anthropologie du déchet ménager. Sociologie. [Doctoral Thesis] *Université Panthéon-Sorbonne - Paris I*
- Ndum, A. E. (2013). Bottom-Up Approach to Sustainable Solid Waste Management in African Countries. [Doctoral Thesis] *Cottbus Universitätsbibliothek der BTU Cottbus*.
- Ngambi, J. R. (2015). Déchets solides ménagers dans la ville de Yaounde (Cameroun) De la gestion linéaire vers une économie circulaire. [Doctoral Thesis] *Université du Maine*.
- Nzeefe, A. V. (2016). Potential for Improving Municipal Solid Waste Management in Cameroon. Case study Limbe municipal council. [Doctoral Thesis] *Lahti University of Applied Sciences*.
- Okudzeto Awo, S. (2022). Ghana Must Go: Modernity, Memory and Material Culture in Post-Independence West Africa, Birkbeck College, University of London
- Pradhan Upendra Mani (2008). Sustainable Solid Waste Management In A Mountain Ecosystem: Darjeeling, West Bengal, India, Clayton H. [Master's Dissertation] *Riddell Faculty of Environment Earth and Resources Natural Resources Institute, University of Manitoba Winnipeg, Manitoba R3T 2N2*.
- Souhila, H. (2012). Les Représentations Sociales Des Agents De Développement Rural Par La Population Locale Cas De : Dahmane (Commune : Beni Ouarsous) Wilaya. [Doctoral Thesis] *Tlemcen*.
- Tabeyang, E. (2018). Managing Single-Use Land-Based Plastics in Cameroon: Recommendation Drawn from Global Experiences. [Doctoral Thesis] *Malmö, Sweden*.
- Tchoko, G. J. (2006). Récupération et Recyclage des emballages à Yaounde : Contribution à une Anthropologie des Stratégies de Survie en Milieu Urbaine. [Doctoral Thesis]
- Thompson, M. (1979). Rubbish Theory: The Creation and Destruction of Value. [Doctoral Thesis] *Oxford; New York: University Press*.
- Touhey, E. (2019). The influence of plastic bag bans on pro-Environmental behaviours in Rhode Island Coastal Communities. [Doctoral Thesis] *University of Rhode Island*.
- Vergara, S. E. (2011). Transforming trash: reuse as a waste management and climate change mitigation strategy. [Doctoral Thesis] *University of California*.
- Ximena, T. (2019). Representations of garbage and disposal practices on a university campus. A case study of the Social Sciences Faculty. [Doctoral Thesis] *University of Buenos Aires*.
- Young D. J. B. (2001). The Colours of Things: Memory, Materiality and an Anthropology of the Senses in North Western South Australia. [Master's Dissertation] *University College London*.
- Záborská, H. (2013). Terminology of Waste Management: Structure and Evolution. [Doctoral Thesis] *Masaryk University*.

## Webography

- Abah, J. (2011). Sustainable waste management in Cameroon: A case study of the Olembe dumpsite, Yaounde. Retrieved from [https://commons.wmu.se/cgi/viewcontent.cgi?article=1675&context=all\\_dissertation](https://commons.wmu.se/cgi/viewcontent.cgi?article=1675&context=all_dissertation). Accessed on November 19, 2020
- Abanda-Tezo, E. D. (n.d.). Setting Up an NGO in Cameroon. LinkedIn. Retrieved from <https://www.linkedin.com/pulse/setting-up-ngo-cameroon-esaya-daniel-abanda-tezo>. Accessed on April 4, 2023
- Abdulaziz, M. (2019). Islam's Coexistence With Other Beliefs And Faiths. Youth Ki Awaaz. <https://www.youthkiawaaz.com/2019/02/coexistence-of-islam-with-others/>. Accessed on August 19, 2023
- Achu, H. B., & Mungwe, N. F. (2007). Waste management in Cameroon: A new policy perspective. *Waste Management*, 27(10), 1490-1491. <https://doi.org/10.1016/j.wasman.2007.04.005>. Accessed on February 19, 2022
- Africanews. (2017, July 26). Cameroon fights pollution by turning used plastics into jobs. Retrieved from <https://www.africanews.com/2017/07/26/cameroon-fights-pollution-by-turning-used-plastic-into-jobs/>. Accessed on August 7, 2021
- Antares Beta. (2018, July 27). Des ingénieurs inventent un sac plastique qui se dissout dans l'eau. *Le Point*. Retrieved from <https://www.google.com/amp/s/amp.lepoint.fr/2239526>. Accessed on July 27, 2018
- Author. (2019, April 14). The key to traveling well with Jonathan Adler & Tan France. *Fast Company*. Retrieved from <https://www.fastcompany.com/90456091/the-key-to-traveling-well-with-jonathan-adler-tan-france>. Accessed on July 2, 2019
- Bakker, L., & Groves, C. (2019). Bottled water and the plastic society: A critique of bottled water from source to waste. *The Journal of Modern African Studies*, 57(4), 581-604. <https://doi.org/10.1111/maq.12514>. Accessed on September 6, 2020
- Basics in solid waste management. (2019, February 17). Retrieved from [http://www.sandec.ch/SolidWaste/Documents/04SWManagement/Basics\\_of\\_SWM.pdf](http://www.sandec.ch/SolidWaste/Documents/04SWManagement/Basics_of_SWM.pdf). Accessed on November 19, 2020
- Brodmerkel, A., & Brindisi, M. (2018, August 22). Process for producing plastic granular. Retrieved from <http://patents.google.com/patent/US3308211A/en>. Accessed on April 12, 2019
- Cameroon Adventures and Tours. (n.d.). Gender Roles and Statuses. Retrieved from <https://cameroonadventuresandtours.com/gender-roles-and-statuses/>. Accessed on January 15, 2019
- Cameroon Tribune. (2019). Yaounde 1er: Une campagne de sensibilisation sur la gestion des déchets. Retrieved from <https://www.cameroon-tribune.cm/article/yaounde-1er-une-campagne-de-sensibilisation-sur-la-gestion-des-dechets>. Accessed on April 11, 2023
- Centre for Science and Environment. (n.d.). Plastic & the environment. Retrieved from <https://www.cseindia.org/content/downloadreports/11606>. Accessed on November 12, 2019

- Dansk Affaldsforening, DI, Dansk Energi & Miljøstyrelsen. (2014). Beate, Benchmarking af affaldssektoren 2014 (data fra 2013) - Forbrænding. Retrieved from <http://www.ft.dk/samling/20141/almdel/miu/bilag/236/1516415.pdf>. Accessed on May 17, 2022
- Fisher, K. (2019). The Anthropology of Plastics: An Agenda for Local Studies of a Global Matter of Concern. Retrieved from [https://www.researchgate.net/publication/332322264\\_The\\_Anthropology\\_of\\_Plastics\\_An\\_Agenda\\_for\\_Local\\_Studies\\_of\\_a\\_Global\\_Matter\\_of\\_Concern](https://www.researchgate.net/publication/332322264_The_Anthropology_of_Plastics_An_Agenda_for_Local_Studies_of_a_Global_Matter_of_Concern). Accessed on April 19, 2023
- Gebre, B. M. (2008). Plastic waste in rivers: Assessment, sources, and impacts on the fishery sector. *Environment International*, 34(6), 740-749. <https://doi.org/10.1016/j.envint.2007.11.002>. Accessed on May 11, 2020
- Harries, J. (2017). Anthropology's Origins, Christianity, and a Perspective from Africa. *On Knowing Humanity Journal*. [https://www.academia.edu/33846139/Anthropologys\\_Origins\\_Christianity\\_and\\_a\\_Perspective\\_from\\_Africa](https://www.academia.edu/33846139/Anthropologys_Origins_Christianity_and_a_Perspective_from_Africa). Accessed on April 16, 2020
- <https://www.nyulawglobal.org/globalex/Cameroon1.html>. Accessed on May 10, 2023
- International Organization for Migration. (2021). Cameroon. Retrieved from <https://www.iom/countries/cameroon>
- Kima and Partners. (n.d.). Register a Non-Governmental Organisation in Cameroon (NGO). Retrieved from <https://www.kimaandpartners.com/registration/register-a-non-governmental-organisation-in-cameroon-ngo/>. Accessed on April 20, 2020
- Kinsmen Advocates. (n.d.). How to Register an NGO in Cameroon. Retrieved from <https://kinsmenadvocates.com/legal-documents/how-to-register-an-ngo-in-cameroon>. Accessed on September 10, 2021
- Mbaye, R. (2009). A review of municipal solid waste management in Yaounde, Cameroon. *Waste Management*, 29(2), 721-730. <https://doi.org/10.1016/j.wasman>. Accessed on May 4, 2001
- Ndi, A. N., & Jinadu, O. (2014). Urban Governance of Household Waste and Sustainable Development in Sub-Saharan Africa: A Study from Yaounde, Cameroon. Retrieved from [https://www.academia.edu/104930427/Urban\\_Governance\\_of\\_Household\\_Waste\\_and\\_Sustainable\\_Development\\_in\\_Sub\\_Saharan\\_Africa\\_A\\_Study\\_from\\_Yaounde\\_Cameroon](https://www.academia.edu/104930427/Urban_Governance_of_Household_Waste_and_Sustainable_Development_in_Sub_Saharan_Africa_A_Study_from_Yaounde_Cameroon). Accessed on September 13, 2021
- Official Journal of the European Union. Retrieved from <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:en:PDF>. November 19, 2020
- Perrot, J. (1988). Les déchets en Afrique au sud du Sahara [Waste in Sub-Saharan Africa]. *Cahiers d'Outre-Mer*, 41(161), 333-352. Retrieved from



[https://www.persee.fr/doc/caoum\\_0373-5834\\_1988\\_num\\_41\\_161\\_3246](https://www.persee.fr/doc/caoum_0373-5834_1988_num_41_161_3246) Accessed on March 15, 2023.

- Republic of Cameroon, Ministry of Decentralization and Local Development. (n.d.). Decentralization and local development in Cameroon. Retrieved from <<http://www.minddevel.gov.cm/en/decentralization-and-local-development-in-cameroon/>>. Accessed on April 11, 2023
- Smith, J. (n.d.). Plastic. Cultural Anthropology. Retrieved from <https://culanth.org/fieldsights/plastic>. Accessed on August 18, 2022
- U.S. Department of State. (n.d.). Cameroon. Retrieved from [http://www.ediplomat.com/np/post\\_reports/pr\\_cm.ht](http://www.ediplomat.com/np/post_reports/pr_cm.ht). Accessed on November 19, 2020
- United Nations Environment Programme. (n.d.). Africa region: Plastic pollution and marine litter law and policy. Retrieved from <https://leap.unep.org/en/countries/case-studies/africa-region-plastic-pollution-and-marine-litter-law-and-policy><https://journals.sagepub.com/doi/full/10.1177/13591835211066808>. Accessed on August 5, 2022
- Wirngo, S. (n.d.). Setting Up a Non-Governmental Organisation in Cameroon. LinkedIn. Retrieved from <https://www.linkedin.com/pulse/setting-up-non-governmental-organisation-cameroon-suiy-wirngo-esq->. Accessed on June 10, 2022

## ORAL SOURCES

No.	Name	Sex	Location	Profession	Date	Age
1	Abanda Pierre	F	Mokolo	Trader	11 <sup>th</sup> March 2018	44
2	Alphonse Mbida	M	Ekounou	Student	13 <sup>th</sup> October 2021	20
3	AMBANI Christine	F	Etoa-Meki	Laboratory Technician in Jourdain Clinic	13 <sup>th</sup> April 2020	25
4	AMOUGOU Marie	F	Melen	Trader	11 <sup>th</sup> June 2022	52
5	Anatole Ondoua	M	Mvog-mbi	Student	8 <sup>th</sup> April 2022	19
6	Anne Marie Eyenga	F	Omnisport	Housewife	14 <sup>th</sup> May 2021	47
7	Annette AYUK	F	Ekounou	House maid	10 <sup>th</sup> March 2020	36
8	ATANGANA Henry	M	University of Yaounde 1	Student L3	12 <sup>th</sup> April 2020	22
9	ATEH Joshua	M	Mvog-Betsi	Eboueur /HYSAC AM	9 <sup>th</sup> March 2018	28
10	ATEMFACK Franck	M	Olezoa	Unemployed	15 <sup>th</sup> September 2020	58
11	BEBGA Basile	M	Nkomkana	ICT Technician	22 <sup>nd</sup> February 2024	40
12	Benjamin ABESSOLO	M	Mvan	Worker /Namé Recycling	5 <sup>th</sup> October 2019	43
13	Brenda MENDOUGA	F	Ekounou	Housewife	18 <sup>th</sup> November 2020	41
14	Brigitte NGA	F	Melen	Nurse	11 <sup>th</sup> June 2021	35
15	Caroline	F	Odza	Housewife	2 <sup>nd</sup> April 2018	47
16	Chef TOUMI	M	Soa	Chief of Production SOFAMAC	4 <sup>th</sup> July 2018	51
17	Christelle NGONO	F	Mimboman Liberté	Housewife	8 <sup>th</sup> June 2021	22
18	DONFOUET T ALAIN	M	Musee National	Guide	26 March 2024	51
19	ELOUNDOU Pierre	M	MINEPAT	Civil servant	10 <sup>th</sup> April 2020	46
20	EMBOLLO Jean	M	Nsimeyong	EcoClean	6 <sup>th</sup> March 2020	46
21	Ernest LATE	M	Messa	Shop keeper	11 <sup>th</sup> July 2023	51
22	Etienne N	M	Simbock	Waste Picker/CIPRÉ	16 <sup>th</sup> April 2020	27
23	EWARE John Paul	M	Etoudi	Unemployed	9 <sup>th</sup> August 2023	42
24	EYENGA Claudine	F	Ekounou	Housewife	13 <sup>th</sup> August 2021	53
25	FONKOU Pierre	M	Soa	Chef-Adjoint/ Injection/SOFAMAC	4 <sup>th</sup> July 2018	30
26	FOUDA Joseph	M	MINEPAT	Civil servant	11 <sup>th</sup> November 2020	42
27	Guy ETOUNDI	M	Odja Borne 10	Plastic bag trader	17 <sup>th</sup> August 2020	37

28	Hadjija	F	Efoulan	House-wife	8 <sup>th</sup> December 2021	43
29	Issa ABDOULAYE	M	Odza	Night watchman	9 <sup>th</sup> June 2022	48
30	Jule KAMGA	M	Mokolo	Trader	20 <sup>th</sup> July 2020	52
31	Julie NGONO	F	Essos	Hair-dresser	19 <sup>th</sup> September 2018	29
32	KAMENI Joseph	M	Mokolo	Trader /Shop keeper	13 <sup>th</sup> August 2021	43
33	KAMTO Olivier	M	Mbankolo	Printing press worker	16 <sup>th</sup> November 2022	52
34	M. AYARI	M	Soa	Assistant Director SOFAMAC	2 <sup>th</sup> July 2018	51
35	M. DOMBOU	M	Soa	Chief Section Injection/ SOFAMAC	3 <sup>th</sup> July 2018	47
36	M. TCHAKAM	M	Soa	Chief Section Extrusion/ SOFAMAC	4 <sup>th</sup> July 2018	42
37	Marc MBARGA	M	Oyomabang	Plastic bottle trader	9 <sup>th</sup> June 2022	28
38	Marie-Madeleine	F	Oyomabang	House-wife	13 <sup>th</sup> August 2021	57
39	Marie-noel Mbarga	F	Messassi	Housewife	15 <sup>th</sup> March 2019	52
40	MEKOULOU Oyono Didier	M	Nkolmesseng	Waste picker	2 <sup>nd</sup> March 2018	42
41	Mendouga	F	Nkolmesseng	Housewife	30 <sup>th</sup> September 2022	45
42	MENDOUGA Antoinette	F	University of Yaounde 1	Student /Master 1	13 <sup>th</sup> August 2021	24
43	Mr JOSWA	M	MINEPDED	Chief of Brigade	2021-2024	49
44	MUSI Justine	F	Ngouso	House-wife	9 <sup>th</sup> March 2018	58
45	Myriama ADAMA	F	Nlongkak	Trader/ House-wife	7 <sup>th</sup> May 2019	33
46	Nadine MENGUE	F	Kondengui	State agent	9 <sup>th</sup> June 2022	44
47	NGAM Delphine	F	Ngouso	Teacher	9 <sup>th</sup> March 2018	39
48	NJOH Madeleine	F	Nkolmesseng	House-wife	13 <sup>th</sup> August 2021	26
49	NKEM Robert	M	Mendong	Waste Picker	13 <sup>th</sup> June 2019	56
50	NKOLO Paul	M	Ngoa-Ekelle	Call box	19 <sup>th</sup> November 2022	35
51	NKOSU Yannick	M	Eleveur	Head of Capacity Control and Valorisation (HYSACAM)	13 <sup>th</sup> November 2022	37
52	NTAMACK Didier Pierre	M	Tsinga	Student	13 <sup>th</sup> August 2021	26
53	ODINGUI Michelle	F	Marche Centrale	Trader	2 <sup>nd</sup> March 2018	48
54	OUSSENI NDAM	M	Efoulan	Gendarme	8 <sup>th</sup> January 2023	35
55	Paul OLINGA	M	University of Yaounde 1	University staff /Decanat	13 <sup>th</sup> November 2022	34
56	Peguy POKAM	M	Oyomabang	Student	2 <sup>nd</sup> March 2018	23

57	Pulcherie NANGA	F	Poste Central	Trader	6 <sup>th</sup> September 2019	34
58	Venatius FORBANG	M	Polytech-Melen	Tailor	13 <sup>th</sup> November 2022	65
59	Virginie EKOTTO	F	Marche Centrale	Trader	15 <sup>th</sup> August 2021	36
60	Virginie Nkolo	F	Messamendongo	Housewife	17th January 2017	56
61	WANDJI Charlie	M	Mvog-Mbi	Shoe trader	3 <sup>rd</sup> September 2019	42
62	Youssuf Ibrahim	M	Mokolo	Trader	11 <sup>th</sup> November 2020	38

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## **GLOSSARY**



<b>Words</b>	<b>Meaning</b>
<b>Culture</b>	The social norms, beliefs, values, customs, and practices shared by a particular group or society.
<b>Single-Use Plastics</b>	Disposable plastic items designed for one-time or short-term use before being discarded.
<b>Plastic Pollution</b>	Environmental contamination caused by the accumulation of plastic waste in ecosystems, leading to negative impacts on wildlife, habitats, and human health.
<b>Behaviour Change</b>	The process of altering individual or collective actions, attitudes, and habits regarding the use and disposal of single-use plastics, often influenced by cultural factors.
<b>Cultural Practices</b>	Traditions, rituals, and customs related to the production, consumption, and disposal of goods, including single-use plastics, within a specific cultural context.
<b>Environmental stewardship</b>	Environmental stewardship, from an anthropological perspective, refers to the responsible management and conservation of natural resources and ecosystems by human communities.
<b>Environmental consciousness</b>	Awareness, concern, and actions taken to mitigate environmental degradation, including efforts to reduce single-use plastic consumption and promote sustainable alternatives.
<b>Plastic recycling</b>	Plastic recycling refers to the socio-cultural practice of collecting, sorting, and processing discarded plastic materials with the aim of reusing them in new products or materials.
<b>Plastic upcycling</b>	Plastic upcycling refers to the practice of creatively repurposing discarded plastic materials to produce new items of higher value or quality.
<b>Consumerism</b>	The cultural phenomenon characterized by the continuous acquisition and consumption of goods, including single-use plastics, driven by societal values and economic factors.
<b>Plastic repurposing</b>	Plastic repurposing refers to the practice of creatively transforming plastic materials that have served their original purpose into new and useful items, often through innovative methods or techniques.
<b>Plastic reuse</b>	Plastic reuse refers to the practice of employing plastic items beyond their original intended purpose or lifespan.
<b>Plastic use</b>	Plastic use refers to the consumption, application, or utilization of plastic materials within a given society or cultural context.
<b>Sustainability</b>	The ability to meet the needs of the present generation without compromising the ability of future generations to meet their own needs, often involving efforts to reduce single-use plastic usage and promote eco-friendly alternatives.
<b>Plastic bans</b>	Plastic bans refer to legislative or regulatory measures implemented by governments or authorities to restrict or prohibit the production, sale, distribution, or use of certain types of plastic products.
<b>Plastic regulations</b>	Plastic regulations refer to governmental or institutional policies and guidelines aimed at managing the production, use, disposal, and recycling of plastic materials within a specific jurisdiction or context.

<b>Waste management</b>	The collection, transportation, processing, recycling, and disposal of waste materials, including single-use plastics, to minimize environmental and health impacts.	
<b>Plastic bags</b>	Thin plastic bags typically used for carrying groceries, goods, or takeaway food.	
<b>Plastic straws</b>	Small, single-use plastic tubes used for drinking beverages.	
<b>Plastic cutlery</b>	Disposable plastic forks, spoons, and knives often used for eating meals on-the-go.	
<b>Plastic water bottles</b>	Single-use plastic containers used for storing and drinking water.	
<b>Plastic food packaging</b>	Thin plastic wraps or containers used for packaging food items.	
<b>Plastic cups</b>	Disposable plastic cups used for serving beverages at events or parties.	
<b>Plastic Straws</b>	Small plastic sticks used for stirring drinks.	
<b>Plastic Plates</b>	Disposable plastic plates used for serving meals at events or picnics.	
<b>Plastic Food Containers</b>	Single-use plastic containers used for storing leftovers or takeout food.	
<b>Plastic Utensils</b>	Disposable plastic utensils used for cooking or serving food.	
<b>WASTE IN SOME LOCAL LANGUAGES</b>		
<b>English</b>	dirt, debris, rubbish, trash, refuse, garbage, scrap, litter. spoilage	
<b>French</b>	saleté, ordure, déchet, débris	
<b>Language</b>	<b>Word for waste</b>	<b>In English</b>
<b>Fang</b>	mbwiên	Waste
<b>Haussa</b>	ɓata	Waste
<b>Bassa'a</b>	yimîs (Singular)/ gwimîs (Plural)	Waste
	(híndí)	Dirt/black
<b>Duala</b>	ébindi	waste
<b>Fe'efe'e</b>	Pi't?'	Too dirty
<b>Peule/ Fulfude</b>	Saaltidi	Dirt
<b>Ngwo</b>	ndòdò (ènkàm ndòdò)	Waste waste basket
<b>Babungo</b>	dàydày	Useless
	nyilə	dirt
	bwə	Dirt, bad, Ugly
<b>Bafanji</b>	nù'	waste, bad
	minu' yooŋ	rubbish, garbage
	fyé	dirt
<b>Ngiemboon</b>	kũŋě	dung
	ńcũŋ ńtjũŋ	waste, gaspillge

<b>Nooni</b>	die/ dieè	waste, consume
<b>Kom</b>	ilyiṅ	dirt
<b>Akoose</b>	mbinde	dirt
	menyónge	plastic, rubber
	móom	rubbish
<b>Bangou</b>	ndóti	dirt
<b>Yamba</b>	bèp	garbage
	dòti	dirt
<b>Badwe'e</b>	Mpìr	dirt
<b>Mbuko</b>	azay kurzen	waste, dross
<b>Karang</b>	dìkmà	dirt
<b>Kemedzu</b>	kiṅyeṅ	waste
	fio yi binì	waste container
<b>Mmen</b>	Sēsàṅnè	waste
<b>Njyem</b>	Lèkùnùù	Garbage bin; a heap of household waste
<b>Nzime</b>	ntù'kòlò	waste

## **APPENDIX**

## **Informed Consent Form**

**Research Title:** Culture and Single-use plastic management in Yaounde, Cameroon: A contribution to the Anthropology of Development

**Research Supervisor:** Pr. Paschal KUM AWAH. Tel: 677812028

**Principal investigator:** MBANAM BAMBOT Valentine

**Institution:** University of Yaounde 1, Faculty of Arts, Letters and Social Sciences, Department of Anthropology.

### **Purpose or objective of the Study:**

I am PhD student in the University of Yaounde1. I am conducting a research project as part of my PhD Thesis. I am working closely with my Supervisor, Pr. Paschal KUM AWAH. I would like to know if you would be willing to take part in a research study on single-use plastics management.

The research project is part of a study aimed at collecting data on the various methods employed by residents of Yaounde City to manage their single-use plastics, as well as their perceptions regarding the government's ban on plastic bags measuring less than 61 microns. The study seeks to gather insights into their approaches to managing different types of single-use plastics, plastic waste, and potential alternatives to the banned plastics, which pose a threat to the environment.

The data collected will not only be used for the purpose of writing the thesis but also to propose improvements to environmental policies, thereby promoting sustainable waste management to decision-makers. Additionally, this study has the potential to benefit the government in achieving its international commitments, such as the Sustainable Development Goals. These potential benefits are considered indirect outcomes of this project on behalf of the participants.

### **Procedures:**

Prior to the study, you will be asked to identify yourself by giving information on your sex, age, location, profession, level of education and contacts. Then you will be asked to complete a questionnaire that will ask you about how you manage your different single-use plastics; plastic bottles, polyethylene bags, and wrapping plastic papers. We will also like to know why you choose the kind of plastics you use, what you do with them after use especially the first use and your opinion on the waste management system in general and the single-use plastic waste in particular?

Also, we will like to submit to you to an in-depth interview. In this exercise a few questions will be asked on the various perceptions, on issues such as climate change, global warming and equally what you think about sustainable waste management. A tape recorder will be used in order to save every bit of information you are going to reveal to us. Writing down your answers will not be appropriate since it is impossible to write down exactly all what you have to say except for the filling of the questionnaire.

Included in the procedure for data collection of this research, is a digital camera that will be used in order to have iconographic data. We will like to take photographs of the different types of plastic bottles, shopping bags, etc. We shall also like to take photos of their uses, your temporal waste storage place, and your permanent waste deposit sites. These photographs will be used to show how different single-use plastics are used, and disposed after use.

**Confidentiality:**

All the information you provide will be strictly confidential, and your name will not appear on the questionnaire. Instead, your questionnaire will contain an identification number that is known only by the principal investigator of this study. This identification number is used to note that you have returned your questionnaire and will not be attached to the general survey itself. Once you complete filling the questionnaire, simply hand it back to us.

The photographs will be inserted in the final dissertation but the labelling will be dissimulated not revealing which house belongs to whom. Thereby safeguarding your rights to dignity and privacy.

**Potential risk and benefits of participant:**

We have evaluated the nature and scope of the risk of this research and the procedures for data collection to be *minimum*. On your part after reading this form you are permitted to evaluate your risk in the involvement in this research. Questions will be limited only on your single-use plastic waste management and your opinion on the plastic ban as well as your knowledge on other suitable alternatives. All information that shall expose your privacy shall not be disclosed. Only the Supervisor and I will have access to this data. After the research the information on the tape will be deleted and the questionnaires destroyed.

As far as benefits are concerned, there is no direct benefit for you. But however this research may benefit your community indirectly as it may contribute in ensuring environmental sustainability by wisely using what your environment makes available for you not letting out the benefits for future generations.

**Compensation for injury statement:**

Though the nature and scope of the risk of this research as well as the research procedures to be implemented is *minimum* there may be a probability though minimal that harm may occur. In this case, the risk must be justifiable.

**Opportunity of Withdrawal:**

Your participation is voluntary. You may refuse to participate or may discontinue your participation at any time during the course of filling the questionnaire. While we cannot compensate you for your time, your participation will be invaluable to our project.

**Information about this study:**

You will have the opportunity to ask, and to have answers to all the questions about this research, about risk no matter the form (physical or emotional), your rights and welfare by addressing them to the investigator (**MBANAM BAMBOT Valentine, Tel: 675-660-123, bambot2@yahoo.com**) or calling the supervisor (**Paschal KUM AWAH, Tel: 677-812-028**)

**Statement of voluntary participation:**

After reading carefully and understanding the above, we wish that you freely and voluntarily participate in this research by giving us your consent as we would appreciate that you sign your name and date to this form and handing it back to us. This form will be produced in double copies; one copy will be handed to you and the other we shall keep it.

**NB.** Wherever you deem it right to ask for clarification as you read this form, don't hesitate to draw our attention. Stop us and ask any question, we are at your disposal.

\*\*\*\*\*

I have read the information provided above. I voluntarily agree to participate in this study. My consent is coercion free and I am aware that there is no direct benefit or compensation to this research. After I sign, I understand that I will receive a copy of this form from the investigator(s).

-----  
Name

-----  
Date

As soon as you finish reading and signing this informed consent form, we will photocopy this form and hand over a copy to you.

Thank you.

Sincerely,

-----  
**MBANAM BAMBOT Valentine**

**Tel: 675-660-123**

**bambot2@yahoo.com**

-----  
**Paschal KUM AWAH**

**Tel: 677-812-028**

**awahpaschal@yahoo.fr**



## **INTERVIEW GUIDE**

### ➤ **GENERAL INFORMATION ON THE PARTICIPANT**

**The demographic characteristics of the respondent include age, gender, occupation, level of education, place of residence, ethnicity, and religion.**

#### 1. Households:

- Cultural Perceptions and Practices: Exploring Attitudes Towards Single-Use Plastics
- Household Waste Management: Understanding Cultural Influences on Plastic Usage and Disposal
- Socioeconomic Factors and Cultural Norms: Impact of COVID-19 on Single-Use Plastic Consumption in Household Settings

#### 2. Businesses:

- Business Operations and Single-Use Plastics: Cultural and Economic Considerations
- Corporate Perspectives on Waste Management: Integrating Cultural Values and Sustainable Practices
- Cultural Influences on Consumer Behaviour: Exploring the Use of Single-Use Plastics in Business Settings

#### 3. Waste Pickers:

- Informal Waste Management Practices: Cultural Dynamics and Single-Use Plastics Management
- Socioeconomic Realities and Waste Collection: Cultural Perspectives of Waste Pickers
- Community Engagement and Waste Collection: Exploring the Role of Waste Pickers in Cultural Context

#### 4. Informal Waste Management Associations:

- Collective Practices and Cultural Norms: Informal Waste Management Associations and Single-Use Plastics
- Community-Based Waste Management: Cultural Considerations in Informal Waste Management
- Challenges and Opportunities: Cultural Dynamics in Informal Waste Management Associations

#### 5. Formal Waste Management Actors:

- Policy Perspectives and Cultural Relevance: Formal Waste Management Entities and Single-Use Plastics
- Municipal Waste Management Practices: Cultural Considerations and Sustainable Solutions
- Government Policies and Cultural Sensitivity: Integrating Cultural Dynamics in Formal Waste Management

6. Public officials:

## **Interview Guide in the context of COVID-19**

- 1) Households:
  - Cultural Perceptions and Practices: Exploring Attitudes Towards Single-Use Plastics Amidst the COVID-19 Pandemic
  - Household Waste Management: Understanding Cultural Influences on Plastic Usage and Disposal During the COVID-19 Crisis
  - Socioeconomic Factors and Cultural Norms: Impact of COVID-19 on Single-Use Plastic Consumption in Household Settings
  
- 2) Businesses:
  - Business Operations and Single-Use Plastics: Cultural and Economic Considerations During the COVID-19 Pandemic
  - Corporate Perspectives on Waste Management: Integrating Cultural Values and Sustainable Practices Amidst COVID-19 Challenges
  - Cultural Influences on Consumer Behaviour: Exploring the Use of Single-Use Plastics in Business Settings During the COVID-19 Crisis
  
- 3) Waste Pickers:
  - Informal Waste Management Practices: Cultural Dynamics and Single-Use Plastics Management During the COVID-19 Pandemic
  - Socioeconomic Realities and Waste Collection: Cultural Perspectives of Waste Pickers in the Context of COVID-19
  - Community Engagement and Waste Collection: Exploring the Role of Waste Pickers in Cultural Context During the COVID-19 Crisis
  
- 4) Informal Waste Management Associations:
  - Collective Practices and Cultural Norms: Informal Waste Management Associations and Single-Use Plastics Management Amidst COVID-19 Challenges
  - Community-Based Waste Management: Cultural Considerations in Informal Waste Management During the COVID-19 Pandemic
  - Challenges and Opportunities: Cultural Dynamics in Informal Waste Management Associations in the Context of COVID-19
  
- 5) Formal Waste Management Actors:
  - Policy Perspectives and Cultural Relevance: Formal Waste Management Entities and Single-Use Plastics During the COVID-19 Pandemic
  - Municipal Waste Management Practices: Cultural Considerations and Sustainable Solutions Amidst COVID-19 Challenges
  - Government Policies and Cultural Sensitivity: Integrating Cultural Dynamics in Formal Waste Management in the Context of COVID-19

## OBSERVATION GUIDE

### 1. Cultural Practices and Perceptions:

- Observe traditional practices related to resource use and waste management within different cultural groups in Yaounde.
- Note any rituals, taboos, or customs that influence the disposal or reuse of single-use plastics.
- Pay attention to cultural attitudes towards environmental conservation and sustainability as they relate to single-use plastic management.
- Observe how cultural practices and perceptions regarding single-use plastic usage have evolved in response to the COVID-19 pandemic.
- Document any changes in traditional practices related to resource use and waste management within different cultural groups in Yaounde during the pandemic

### 2. Daily Life and Consumption Patterns:

- Document the use of single-use plastics in various settings, such as markets, households, and public spaces.
- Observe how single-use plastics are acquired, utilized, and discarded in different cultural contexts.
- Note any cultural norms or behaviours that influence the consumption and disposal of single-use plastics.
- Observe how the pandemic has influenced the acquisition, utilization, and disposal of single-use plastics in different cultural contexts.
- Note any shifts in cultural norms or behaviours that have occurred due to the pandemic's impact on consumption and waste management practices.

### 3. Community Engagement and Initiatives:

- Identify community-led initiatives or programs aimed at reducing single-use plastic usage.
- Observe community events, workshops, or educational activities focused on single-use plastic management.
- Document the level of community participation and the cultural factors that influence engagement in these initiatives.

- Identify any new community-led initiatives or programs aimed at addressing single-use plastic usage in response to COVID-19
- Observe community events, workshops, or educational activities focused on single-use plastic management during the pandemic

#### 4. Waste Management Practices:

- Observe waste disposal and recycling practices within different cultural and socioeconomic contexts.
- Note the role of cultural beliefs and social structures in shaping waste management behaviours.
- Document any informal or formal waste management systems and their cultural significance.
- Observe changes in waste disposal and recycling practices within different cultural and socioeconomic contexts as a result of the pandemic.
- Document any informal or formal waste management systems that have adapted to the challenges posed by the pandemic and their cultural significance.

#### 5. Interactions and Social Dynamics:

- Observe social interactions and conversations related to single-use plastic usage and waste management in households, businesses, communities
- Observe social interactions and conversations related to single-use plastic usage and waste management in the context of COVID-19 households, businesses, communities.
- Document how cultural values, social norms, and peer influences impact individual behaviours.
- Note any cultural barriers or facilitators to adopting sustainable practices related to single-use plastic management.
- Note any cultural barriers or facilitators to adopting sustainable practices in waste management during the COVID-19 pandemic.

#### 6. Policy and Governance:

- Investigate the implementation and enforcement of waste management policies in diverse cultural settings.
- Investigate the impact of COVID-19 on the implementation and enforcement of waste management policies in diverse cultural settings.

- Document the role of local governance and regulatory frameworks in shaping cultural attitudes towards single-use plastic management.
- Document any cultural considerations in the development and implementation of waste management policies that have emerged in response to the pandemic.
- Note any cultural considerations in the development and implementation of waste management policies.

#### 7. Reflection and Analysis:

- Reflect on the cultural nuances and social dynamics observed in relation to single-use plastic management.
- Reflect on the cultural nuances and social dynamics observed in relation to single-use plastic management during the COVID-19 pandemic.
- Analyze the intersection of culture, socioeconomic factors, and environmental awareness in shaping behaviours.
  - Consider the implications of cultural insights for developing culturally sensitive interventions and policies related to single-use plastic management in Yaounde.
- Consider the implications of cultural insights for developing culturally sensitive interventions and policies related to single-use plastic management in Yaounde in the context of COVID-19.

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