

**THE CONTRIBUTION OF CIVIL SOCIETY IN CIRCULAR
ECONOMY TO THE SUSTAINABLE DEVELOPMENT IN MALI
CASE OF SELECTED CIVIL SOCIETY ORGANIZATION IN PLASTIC
WASTE MANAGEMENT IN BAMAKO**

By

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**Thesis submitted in partial fulfillment of the Academic Requirements for
the Award of Master's Degree in Development Studies**

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DECLARATION

I, Cheick Abdoul Kader DIARRA, hereby declare that this research on **The Contribution of civil society Organization in Circular Economy to the Sustainable Development: Case of Selected Civil Organization in Plastic Waste Management in Bamako City** is a result of my original work and has never been submitted to any other university or institution of higher learning for any academic award.

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APPROVAL

This thesis has been carried by Cheick Abdoul Kader DIARRA on **The Contribution of civil society Organization in Circular Economy to the Sustainable Development: Case of Selected Civil Organization in Plastic Waste Management in Bamako City** has been conducted under my supervision and submitted with my approval.

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DEDICATION

To my Late father Cheick Oumar Diarra and my mother Assitan Traoré

To my Brothers and Sister Mohamed Rachid Diarra, Ibrahim Diarra, Mohamed Diarra, Ismael Diarra, Mariam Kallé Traoré and my wife Fatoumata Kouma.

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ABBREVIATIONS, ACRONYMS AND SYMBOLS

ACEED	Association for the Conservation of Environment and Sustainable Development
AGIR	ONG AGIR
AMED Durable	Association Malienne pour l'environnement et le développement
APROMODEF	Association pour la Promotion Juridico-économique de la Femme et de l'Enfant
BUPE	Brigade Urbaine de Protection de l'Environnement
CFO	Community Faith Organizations
CICFT	Center Collectivity Territorial
CNCS	National Counsel of Civil Society
CNJ	National Youth Counsel
DSUVA	Direction des Services Urbaine de Voirie et d'Assainissement
FD	Women and Development
GPAP	Global Plastic Action Partnership
HTTP	Hyper Text Transfer Protocol
JCI Bamako Etoile	Junior Chamber International Bamako Etoile
LGA	Local Government Act
MINENV	Minister of Environment in Rwanda
MINUSMA	Mission Dimensionnel des Nations Unies Pour le Mali
NGOs	Non-Governmental Organization
NPM	New Public Management
OECD	Organization for Economic Co-operation and Development
OSADL	Organization for solidarity and support for local development
PAPD	Pro-poor Agenda for Prosperity and Development
PRS	Poverty Reduction Strategy
RGB	Rwanda Governance Board
SPSS	Statistical Package for the Social Sciences
ULK	Université Libre de Kigali
UNEP	United Nations Environment Programme
%:	Percentage

ABSTRACT

This thesis investigated the crucial role of Civil Society organizations in the implementation of Circular Economy policies to enhance environmental management. Focusing on a specific community within Bamako, the study aims to improve sustainable plastic waste management across three circumscriptions in the Bamako District. The objectives encompass assessing Circular Economy policy's impact on efficiency, identifying barriers to plastic waste management, and formulating strategies to empower Civil Society (including Youth, Women associations, and CBOs) for comprehensive national environmental planning and advocacy, particularly within the private sector and at the local community level. A mixed research approach combining qualitative and quantitative methods was employed, with a sample size of 95 respondents were drawn from 1328 officials and Civil Society organization representatives. Data collection involved interviews, questionnaires, and data from second hand. The findings underscored the significant contributions of Civil Society to intervene on plastic waste management through Circular Economy initiatives among state (policy framework) and private sector (job opportunities) . However, challenges hindering the full realization of circular economy principles, including reuse, recycling, and waste reduction, were identified. To address these challenges, the study proposes a range of recommendations. These include harnessing technology and innovative consumption solutions, increasing resource allocation to local government and Civil Society, and capacity-building within the private sector. Additionally, the study highlights the importance of training, community mobilization, and outreach, fostering partnerships, establishing accountability mechanisms, encouraging community participation, developing a comprehensive waste reduction strategy, and improving financial management within community organizations.

Keywords: Plastic waste Management, Civil Society, Circular Economy, Reused, Recycle, Recovered, R, Sustainable Environment.

CHAPTER 1: INTRODUCTION TO THE STUDY

This chapter provides the research proposal of the study entitled: “Contribution of civil society for sustainable development through Circular economy in Mali: Case Study of plastic waste management in Bamako City”. It consists of the background of the study, statement of the problem, research objective, and research questions. It also consists of the scope of the study, the significance of the study as well as the structure of the thesis.

1.1 Background of the study

Mali, influenced by global development theories, faces severe environmental threats with daily plastic waste production of 2000 tons (Konate, 2022). The extensive use of plastic, driven by its diverse applications and adaptability, has surged, surpassing 1950s levels (Network, 2023). Plastic's ubiquity extends to medical, textile, and packaging industries, with each application demanding specific material properties. However, despite warnings since 1992, this surge poses challenges for authorities and civil society in managing its environmental impact. Plastic's versatility demands varied material properties, achieved by modifying resins with polymers, fillers, and additives for specific applications. This poses challenges for authorities and civil society post-Rio 1992 alerts (UN, 1992). The Western development model has imposed industrialization as the key strategy for African economies, overlooking environmental concerns. It has transformed African cities to mirror Western counterparts, disregarding environmental factors and effective management. This approach has led to the accumulation of harmful by-products, contaminating African cities like Bamako, Mali, which lacks a waste disposal site since gaining independence in 1960, resulting in 66 years of environmental degradation (Konate, 2022). It is not only Mali, faces the issue, also according the report on Plastic issues in Kenya (Ndugire, 2014) waste plastic contributes the visual pollution. Plastic pollution affects tourism and blocks household gutters, leading to severe water problems in landlocked Mali.

The Sahel desert's vast expanse worsens the situation, creating breeding grounds for disease vectors like mosquitoes and exacerbating health issues, including malaria, highlighting the nationwide challenge.

According (Gasarabwe, 2021) "We see heaps of rubbish, gutters turned into landfills and waste burned in the streets". Even some country forbidden its using and its requesting all to implement policy on this way. They block the watercourse. When they do not find their way into the river, bring out inundations. Secondly when they pass, carrying out other water bodies which kill aquatic wildlife and further when the animals ingest the plastics by mistaking for food normally get diseases and death. This fact is a great lost while the rate of breeding in GDP represent 10 per cent, (worldbank, 2022). In addition, children who are growing in street or market area must facing gastric disease caused by the Syndrome of Pica (eating disorder things not usually considered as food). How many generation, is concerned by impact of plastics waste which take 20 to 1,000 years (Roberts, 2014) to break down and decomposed totally whether 2 to 1 millenary generations. Plastic's extensive usage faced criticism in the 1970s, primarily framed as a littering problem addressable by changing consumer behavior and promoting recycling. Recent years have witnessed a resurgence in plastic-related concerns, drawing significant attention from media, civil society, academia, international organizations, governments, and businesses. Ocean pollution and its visible harm to marine life have propelled this focus. However, examining plastics' entire life cycle reveals numerous health and environmental issues, spanning local to global scales. If unaddressed, plastic pollution threatens to further degrade aquatic ecosystems and exacerbate Sahara desertification, impacting Mali. Moreover, events like the 50th Anniversary Independence Concerts in Mali have contributed to increased plastic waste along the Niger River's shores, compounding socio-economic challenges in urban areas, particularly among Bozo and Somonon tribes and other fishers.

Furthermore, in rural areas, watercourses and groundwater are polluted due to blockages, particularly in southern Mali, where 90% of the population resides, as reported by BUPE (worldbank, 2022). Mali's urban expansion and regionalization policies impact land management. As the world prioritizes Sustainable Development Goals by 2030, the UN estimates more plastics than fish by 2050, with a 40% increase in plastic production within a decade (Foundationplasticoup, 2021). If action isn't taken, plastic will outweigh fish in oceans by 2050, warned by the UN, posing threats to marine life and coral reefs. Millions' food access will be at risk due to the plastic influx. Despite the high malnutrition rate and desert expansion, Mali grapples with multifaceted crises. In contrast to some poor countries banning plastics since 2002, Mali remains a significant plastic waste contributor. Policy initiatives started in 2015, saving over two tons of waste (Konate, 2022) for the waste all categories. In Bamako's heart, plastic waste has become a pressing issue, affecting the Niger River, vital to the Bozo ethnic group's economy. This study proposes policies to empower civil society, fostering waste management collaboration between the state, private sector, and Mali's partners.

The study highlights a crucial advocacy link in development policy planning, emphasizing the role of civil society in promoting sustainable management through circular economy policies for urban solid waste. The research underscores Bamako's environmental degradation during rainy seasons, with pollution and public health risks stemming from improper waste disposal, drainage congestion, and water contamination. The study aims to advocate for waste reduction through sorting, recycling, reusing, recovering, and proper disposal methods, revealing inadequacies in the current municipal solid waste management system, even for households, shops, and restaurants, in compliance with waste management and handling regulations. However (T.Tadesse, 2007) analyzed the factors that influence household waste disposal decision making which carry out the lack of optimal policy.

As the using Morocco Corporation partner of District of Bamako “OZONE” charged during 6 years 2015-2022 are not cover the wide challenges and has superposed the old collecting way the household plastic waste (O.Sawadogo, 2022). This failing was also in Bangladesh (Haid and Ali, 2005) their studied on the solid waste management system of Dhaka City Corporation (DCC) and founded that DCC failed to respond the expected of services with the existing capacity and trend of waste management. (Zubrug, 1999) stated that problem areas in developing countries include: (i) inadequate service coverage and operational inefficiencies of services, (ii) limited utilization of recycling activities, and (iii) inadequate landfill disposal.

All to believe, like the solution is treated on a wrong way. Bekin *et al.* (2007) noted that in the absence of appropriate institutional structures, it becomes difficult to ensure solid waste reduction at an individual level. They continue to emphasize that waste reduction may only be viable in a community with some control over production and consumption of some items (Bekin, 2007). Civil society comprises diverse small groups that connect key governance actors, including the private sector and the state, advocating for awareness and influencing development policies across social, economic, and political spheres. In the late 20th century, organizations like UIA and the International Labor Organization (ILO) formalized civil society's role in waste plastic management, popularizing it as a development tool in Africa (UIA, 2022) and (ILO, 2018). These organizations recognized civil society's potential in providing access to empowerment services and resources for communities. They promoted the utilization of global policies to facilitate sustainable environmental practices and enable the implementation of the 17 Sustainable Development Goals (SDGs). The study underscores the significant link between improper urban solid waste management and civil society's efforts to mobilize both the state and private sector.

Civil society has a longstanding history in Africa, particularly in Mali, as a tool for national management inclusion, disease reduction, and employment generation. It highlights the urgency of addressing solid waste management and its associated issues in the district. (Gebril, 2010) resumed that population growth, plus rapid urbanization, and industrialization resulted in increasing problems of solid wastes in some city as during the raising of Benghazi City. It pasts like the civil society are not considering the threatening. According the Strategic Framework for Economic Recovery and Sustainable Development (CREED, 2019) the vulnerability of the country face at the climate change is enough and insufficiently consider by the public policy. Civil society is expected to assist the state but often faces challenges in implementing effective public policies for citizen welfare. With Bamako's low literacy rate of 31%, many residents struggle to grasp global environmental challenges, hindering adequate measures (OurdataMali, 2020).

1.2 Problem statement

Plastic have only been produced on a large scale since the 1950s, but in recent years, output has risen dramatically to about 400 million tons annually Global production of plastics 1950-2015 (World Bank, 2015). Thus, each person uses more than 50 kg of plastic annually.

The solid waste management system of Mali, which has more 19 million inhabitants, is too inefficacy in Bamako and quasi inexistent in other cities. Solid waste output in 2010 was estimated to be 2.372.500 tons, or 6500 tons per day, with a production rate of 0.5 kg/day/person³⁴.

In the capital city of Bamako, the collection of managerial orders is guaranteed by GIE, which, according to the DSUVA (Biaise, 2006), guarantee the coverage of 40 to 47% of households. Currently, the city of Bamako has not operationally controlled discharge but rather old careers. Two locations Noumoubougou and Dialakorobougou have been identified with the help of financial partners to receive new controlled discharges.

Plastic waste generated in the six communes, encompasses heterogeneous and homogeneous wastes from urban, periphery-urban regions. Plastic waste management (PWM) is associated with the control of waste generation, its storage, collection, transfer and transport, processing and disposal in a manner that is in accordance with the welfare of public regarding the following aspects as health, economics, within environmental considerations. In addition the fact that durability is one of many appealing qualities of plastics (Roberts, 2014), then one of the key reasons why society is growing reliance on plastics. Even it continues to be troublesome. Polymers, which are usually produced of oil or another fossil fuel, cannot rust or corrode; as a result, trashed plastic products can stay in the environment for hundreds of years. Contrary to biological materials, the majority of plastics slowly photodegrade rather than biodegrade, resulting in tiny plastic particles (micro- and non-plastics) that are easily ingested by plankton and other living things where they accumulate in human tissues. There has been said and demonstrated about the urgency in solid waste management and its associated problems in the any district in Sahel region.

It past like the civil society are not considering the threat while they are the group which received the damage or this actor of governance ignore the phenomes when according the rate of literacy of the population is high to understand well the global environment challenge (CPDN-Mali, 2015). For example, on various occasions, civil society groups have combined forces with development and/or environmental NGOs to lobby the It can also greatly advance public education on global governance, enabling people to participate actively in the regulatory processes, and it can arouse public discussion about the existing and potential future directions of global government (Mishra, 2012).

The study shows that there is a significant link between civil society and sustainable management of urban plastic wastes. In addition, many questions remain like how the country will immigrate for sustainable development.

In this research, it pointed out that Bamako was facing serious environmental degradation from plastic every raining season such as water, air pollution and public health risk such as skin disease, asthma, diarrhea, due to uncollected disposal of wastes on streets and other public areas, drainage congestion by haphazardly dumped wastes, and contamination of water resources near uncontrolled dumping site.

The study is aimed to making advocacy from civil society on possibilities for waste reduction through sorting and recycling, and disposal methods. The study shows that there is a significant link between the improper management of urban solid wastes and the ways the civil society are going mobilize state and private sector. Civic groups have demonstrated great potentials to both advance and impede security and justice in the globalizing globe during any sustainable policy process (Moon, UN, 2009).

Furthermore, many documentary findings showed the current system of municipal solid waste management in Bamako City was not adequate as per municipal plastic waste (management and handling) rules and bring fact to consider for city of Bamako (ADR, 2018). It analyzed the factors that influence household waste disposal decision making which are not cover by the Morocco partner of Mali (OZONE) further were cleaned the main national road one time by day. Results showed the inadequate supply of waste containers that were driven on open. They increase collection frequency also affects waste generation; In general, a more frequent collection household and consumers produces enough Plastic Waste Management. Then increasing the urbanization is one of the factor that affects in the overall rate of plastic waste generation in many countries as Nepal (Pokhrel, Viraraghavan, 2005). However in Mali which have been programming a new administrative cutting (Biaise, 2006). Plastic waste generation changes per day in addition to the recurring seasonal variations. The quantity of generated waste is a socio-economic indicator and a function of the degree of a nation's development.

The difference in waste production between cities in developed countries 1.5–2 kg/person/day and those in developing countries generally less than 1 kg/inhabitant/day is noteworthy (Guermoud, 2009) then in Mali 2 tons by year.

It is an effort to bring more reliable and orderly responses to social and political issues that go beyond the capacities of states to address individually.

1.3 Objectives of the study

The study consists of general and specific objectives as it is worded below.

1.3.1 General objective

The general objective of this study is analyze the contribution of civil society in circular economy for sustainable environmental management, with a case study on plastic waste management in Bamako City.

1.3.2 Specifics objectives

Specifically, the study intends to attain the objectives detailed thereafter.

- (i) To analyze the current state of plastic waste management in Bamako City
- (ii) To assess the contribution of civil society organizations (women and youth) to the promotion and knowledge about circular economy policy through the plastic waste management (Reduce, Reuse, Refuse, and Recycle) driving sustainable development in Bamako City.
- (iii) Finding out Challenges faced by civil society in plastic waste management in Bamako City.
- (iv) To provide the strategies that civil society can set for addressing the challenges encountered in plastic waste management for sustainable environment at Bamako.

1.4 Research Questions

In order to attain the aforementioned study's specific objectives:

- i. What is the current state of plastic waste management in Bamako City?
- ii. How do civil society groups, particularly women and youth organizations, contribute to the promotion and implementation of circular economy policy by the plastic waste management for sustainable development in Bamako City?
- iii. What are the primary challenges faced by civil society organizations in their efforts to manage effectively plastic waste in Bamako City?
- iv. What strategies can civil society organizations employ to address the challenges they encounter in plastic waste management for contributing to sustainable development in Bamako City?

1.5 Scope of the study

This study was scoped at three levels such as scope in space, in time, and in domain.

1.5.1 Geographical scope

The study was conducted in District of Bamako in Mali, the most polluted (ADR Bamako, 2021) and most peopled with 2,529,300 inhabitants in 2020 city of Mali (law, 1982) and contents the three major areas i.e. Lafiabougou, Badalabougou, and Medina Coura – Omni sport Stadium. This high rate of population in urban area is the most using of plastic. This means that the research focused on collecting data and finding out the Role of Civil Society on plastic waste management on private and empower Civil Society in environment management and circular economy specifically.

1.5.2 Scope in time

The study's temporal scope spans from 2015 to 2023. This period encompasses the partnership between OZONE Morocco and the District of Bamako for waste management initiated in February 2015. Additionally, it aligns with Mali's national environmental protection policy up to 2022, reflecting the vision for environmental improvement by 2030 (CPDN-Mali, 2015). The year 2023 is dedicated to data collection and analysis of challenges to advance sustainable waste management by civil society in the City of Bamako during this specified timeframe. (CPDN-Mali, 2015).

1.5.3 Scope in domain

The study primarily focused on the role of civil society, particularly women and youth organizations, in the context of sustainable waste management and circular economy promotion. It delved into the intricate relationship between civil society, environmental sustainability, and their impact on achieving Sustainable Development Goals 13, 14, and 15. The research examined how civil society initiatives influence public and private policy in Bamako City. Furthermore, it assessed the alignment of these initiatives and their contributions to the socioeconomic development of women and youth. Additionally, the study explored the multifaceted effects of civil society involvement in waste management on economic, social, political, and legal aspects.

1.6 Significance of the study

The research under study is to find out the effectiveness of the civil society in empowering circular economy in Bamako City. It will shed new light on understanding the effectiveness of the civil society of plastic waste management empowered women and youth associations. The results of the study will provide valuable insights into the strategies of Plastic Waste Management on promoting the circular economy and reduce, reuse, recover and recycle specially supported participation in policy decision-making, and overall good governance and

well-being of the population by the civil society. It will also identify the challenges and success factors of wastes plastic management implementation, and provide recommendations for future implementation of similar schemes in City of Bamako.

This study assumes that community-based organizations and non-governmental organizations (NGOs) are involved in implementing a circular economy through recycling, reducing and reusing plastics for plastic waste, changing consumer use and behavior, or creating better waste collection and management practices at the local level to achieve a sustainable environment. Some of these programs have also asked to be expanded in collaboration with the public and commercial sectors.

The beneficiaries of the study include the general community, public institutions, and civil society organization, private sector and future researchers.

The general community in Country, as the study will provide valuable information on the way civil society can improve Plastic Waste Management towards Circular Economy and the well-being of civil society organization and their families, which can compile community development local efforts to achieve sustainable goals 13, 14, 15.

The study holds significant value for public institutions and civil society organizations in Bamako City. It will furnish essential insights and policies concerning the influential role of civil society in advocating for a Green Economy through Circular Economy practices. These insights can, in turn, inform the development of policies and programs at the national level. Furthermore, the study's findings will benefit policymakers, practitioners, and stakeholders engaged in gender and development, financial inclusion, poverty alleviation, and community development efforts, particularly in Mali and Bamako City.

This research has not only contributed to a deeper understanding of Civil Society's role in Plastic Waste Management for sustainable environmental and economic outcomes but also highlighted the importance of embracing the four "R" circular economy principles for global cleanliness and resource conservation. When supported by youth, women, and faith-based organizations in Bamako, these principles can effectively address health and resource conservation challenges.

From an academic perspective, copies of the research report will be archived in the ULK library, making the findings accessible to students and researchers interested in this field, serving as a valuable resource for further study and exploration.

1.7 Organization of the thesis

The Thesis is structured into five chapters. Chapter one is about the introduction to study which presents background of the study, problem statement, objective of the study, scope of the study and significance of the study. Chapter two, entitled literature review, consists of the existing literature relating to the subject study from conceptual and theoretical review, empirical review to conceptual framework and research gap analysis. Chapter three deals with research methodology which focuses on methods of data collection and analysis. Chapter four is about findings presentation, analysis and discussion. Chapter five presents Summary of the findings, conclusion and recommendation.

CHAPTER TWO: LITERATURE REVIEW

This chapter, which is the literature review, reviews the literature of the existing literature relating to the subject study. It presents the conceptual review, the conceptual review, the theoretical framework, the empirical review, and, the conceptual framework research gap.

The review synthesizes existing literature to establish the theoretical framework for the dissertation book, highlighting key concepts, theories, and empirical evidence related to civil society engagement in circular economy initiatives. The objective of this review is to guide the subsequent empirical investigation and analysis to uncover the specific mechanisms and strategies employed by civil society in Bamako City to promote sustainable plastic waste management within a circular economy framework. This theoretical review provides a comprehensive examination of the role of civil society in advancing circular economy practices for sustainable environmental management, with a specific focus on plastic waste management in Bamako City.

The increasing global concern over plastic waste pollution and the imperative shift toward sustainable environmental practices has prompted cities worldwide to seek innovative solutions. Bamako City, the capital of Mali, faces considerable challenges in managing plastic waste (ADR, 2018). Circular economy principles have emerged as a promising approach to address these challenges, emphasizing the reduction, reuse, and recycling of materials to minimize waste generation.

2.0 Introduction

Civil society organizations have played a vital role in advocating for environmental sustainability and have often been catalysts for change in waste management practices (Bekin, 2007). Understanding their role in advancing circular economy principles in the context of plastic waste management in Bamako City is crucial for developing effective

strategies and policies. This theoretical review sets the stage for investigating how civil society can contribute to a sustainable environment through circular economy practices. By integrating key concepts and theories, this review sets the stage for empirical research to uncover specific strategies, impacts, and lessons learned from civil society engagement in the circular economy for a sustainable environment. The inappropriate handling of municipal solid trash and environmental pollution are strongly correlated. (Affon, 2007) finds that the data needed to plan the machinery needed for waste collection and transportation in the Nigerian city of Ogbomosho. Its research argued also that it becomes challenging to assure solid waste reduction at a personal level in any place including Bamako city, because there is lack of proper institutional mechanisms.

In the context of the study on Civil Society's role in Plastic Waste Management in Bamako, Mali, this theoretical perspective emphasizes the importance of engaging and empowering local communities, including women and youth organizations. By involving these local stakeholders in circular economy initiatives, it may be possible to develop waste reduction strategies that align with the community's preferences and contribute to sustainable environmental and economic outcomes (Bekin, 2007).

Furthermore, Civil society play a dynamic role and it can include individuals, organizations, and groups who are involved in using the circular economy according the European Union's Green Paper on Sustainable Plastic Waste and the United States' National Institute for Environmental Research's (NIE). Plastic Waste are example as civil society institutions challenges. Unfortunately, under esteem by almost state and private environmental policies, the role of civil society in the Plastic waste management is an important one for sustainable development, like their reaction at local level is highly susceptible to influence also the country (Moon, CSO finance fund, 2015).

Even the plastic waste is often produced in response to the needs of the society.

There is a growing understanding of institutions that are distinct but work with the government and commercial sector in the fields of sanitation and solid waste. These organizations and institutions are typically referred to by a variety of names, including NGOs/CBOs, third sector, and civil society.

Civil society as a linked between the two keys factors in overall governance structure, moderates the governance policy. In addition, both in the established nations of Europe and North America as well as in the developing nations of Africa, Asia, and elsewhere, this sector and the organizations and institutions that make up it are recognized for their contributions to the improvement of the environment and the resolution of social issues.

Thus, third sector is increasingly recognized in developing nations as a source of creative ideas for sustainable development that emphasize community engagement and "assisted self-reliance." Unfortunately less considered in Mali and politicized, on pressure, the group still check its field to enhance the population wellbeing (Dicko, 2023).

2.1 Conceptual Review

Under this section, first, the researcher defines the key concept of the study and then reviews the concepts based on the objectives of the study so that.

2.1.1 Civil Society

Firstly, it is a great key of governance factors. It refers those organizations which lobbying and advocacy in formal and informal way the common welfare. The term "Civil Society" refers to all non-governmental organizations that act as a pressure group to uphold the rights of the people and groups it represents. She provides the independent actors and countervailing forces necessary for a democracy to function well through her representatives, the work of her associations, syndicates, and consumer groups.

They may focus, for instance, on human rights compliance, social relationship change, land use planning decisions, and the entirety of environmental concerns. In this study, the scope concerns the youth, women and faith organization in local community's level, which address formal and informal actions on plastic waste management in the city of Bamako.

In particular, the impact of civil society has mainly been studied in terms of mobilize state power, although it encompasses other aspects than their impacts on policy outcomes due its powerful influence (Wapner, 1995). Yet, power does not necessarily guarantee that an actor will exert influence in its interactions and in addition (Moon, CSO finance fund, 2015) the free civil society and independent is the fundament of safe governance and reactive at local, national, worldwide level”.

Since the 1992 Earth Summit, there are more opportunities for civil society participation in intergovernmental negotiations on sustainability. These participatory forums are frequently taken at face value as a fix for the alleged democratic weakness of intergovernmental policymaking. I contend, however, that the low effect of these places on policymaking limits civil society's ability to democratize global sustainable environment management. The study investigates how various social groups of women and young people in local level might affect the discussions surrounding trash management as well as the Sustainable Development Goals through the design of advocacy and awareness spaces.

It concludes that civil society has a greater chance of influencing in informal, exclusive participatory venues that are offered early in the international and national bargaining process as (Rolph.Payet, , 2019) argues “People and communities must be put at the center of plastics management, and we must consider entry points, amplify good practices, and collectively move forward to realize an economy that is more circular”.

The 2030 Agenda for Sustainable Development, which the international community adopted in September 2015, has been dubbed "a truly We the Peoples Agenda" by UN Secretary-General Ban Ki-moon, who also praised the definition of the Agenda's central component, the Sustainable Development Goals (SDGs), as the intergovernmental process most inclusive of civil society ever.

However, civil society participants may attempt to sway negotiations by influencing government representatives to adopt their viewpoint. Using participatory spaces both inside and outside of negotiation hubs, they have established initiatives to improve their prospects of influencing intergovernmental policymaking (Carolyne, 2019).

Despite the consensus civil society inclusion can be beneficial in feeding intergovernmental policymaking with collective preferences, its effects on sustainable environment are nowadays recommend (UNEP, 2021).

2.1.2 Faith organizations

A faith organization, also known as a religious organization, is a group or community that is centered on a particular religious belief or faith tradition. These organizations typically have a spiritual or religious purpose and aim to provide a space for individuals to practice and express their faith. Faith organizations can take various forms, such as churches, mosques, synagogues, temples, or other places of worship. They often offer religious services, rituals, ceremonies, and teachings to their members. Additionally, faith organizations may engage in charitable activities, community outreach, and social services, reflecting their commitment to serving others and promoting the values and teachings of their faith.

The successful implementation of this Policy hinges on faith-based organizations' engagement. With 94% of Mali's population affiliating with Christianity or Islam, these religions emphasize environmental stewardship.

Spiritual leaders of all faiths are called upon to explore Holy Texts promoting responsible environmental care as a foundation for human livelihood and well-being;

2.1.3 Young and women organization:

A young and women social group is a community or organization specifically designed to cater to the needs and interests of young individuals, particularly women. These groups aim to provide a supportive and empowering environment for young women to connect, network, and engage in various activities. They may focus on personal development, career advancement, mentorship, education, advocacy, or social causes that are relevant to young women. These groups often organize events, workshops, seminars, and networking opportunities to foster personal growth, build relationships, and address the unique challenges faced by young women in society. By creating a space for young women to come together, share experiences, and support one another, these social groups play a vital role in empowering and uplifting the next generation of futures deciders.

Therefore, they are the one driving the most local public policy for the welfare in the community;

2.1.4 Plastic Waste management

It is action that aims to manage plastic waste from human activities by sustainable policy, making it reusable. Best practices in public health, economics, engineering, conservation, aesthetics, and environmental considerations are crucial. In Mali, millions of tons of plastic waste, primarily from plastic bottles and polythene bags, contribute to environmental challenges and global climate warming, emphasizing the need for effective waste management policies. Plastic wastes are non-liquid wastes that arise from human and animal activities and are discarded as useless or unwanted.

Thus, it includes both organic and inorganic fractions such as kitchen refuse, product packaging from shop, moto oil, cloth, bottles, paper, paint cans, batteries, etc. Unfortunately nothing is perform even a legal framework started late in Mali and are not fully implemented its Law n° 91-47/AN-RM (FAO, 2019).

The following human-related activities contribute to solid urban waste: (i) household waste; (ii) commercial and artisan waste; (iii) seep waste; (iv) industrial waste; and (v) agricultural and animal waste.

These wastes could contain a variety of undesirable pollutants or could serve as a breeding ground for insects and vermin. These pollutants, insects, and roosters pose a persistent threat to human and animal health. For the Collectivities Territorials (CT), managing solid waste is currently a serious issue (NAP.Mali, 2019).

Plastics waste can be divided into the following categories based on their characteristics as Thermoplastics and Thermosetting describing follow:

The molecules that make up thermoplastics have very few cross-links. It may be repeatedly bent into a variety of shapes. Heating thermoplastics allows for form modification. They cannot be heated and reshaped again, in contrast to thermoplastics (Ecosheet, 2020).

The research argues is approximatively 5.25 million pieces of plastic in ocean with almost 2.069,000 tons floating on surface. Therefore, the plastic waste management consists of four actions: (i) to reduce (minimize the use of plastic as much possible by incinerating, segregating dusting, aware people); (ii) to reuse (exploiting it again in several times and promote the lesser production of plastic); (iii) to recycle (converting the plastic in case of Mali in fuel or stones among other) and (v) to refuse (in one word say no to what you don't need in primary way to lower our impact);

2.1.5 The circular economy

It is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. The circular economy strategy makes a distinction between technical materials (such metals), which cannot biodegrade, and biological materials, which can.

It is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. Then the case of this study refers to waste management in terms of Reducing, Reusing, Recovering, and Recycling. The circular economy approach as covered by this conceptual scope is strongly inspired by the work of the Ellen MacArthur Foundation (EMF), which is one of the leading international proponents of this approach.

These two categories of materials are distinct from one another from the standpoint of circularity, and these distinctions must be taken into account just as they are in economic systems. The difficulties in controlling the movement of biological material into and out of nature.

The word “circular” can lead people to believe that the circular economy is only about greater and more extensive recycling, which ignores the dynamic and all-encompassing nature of the strategy. Recycling is far from sufficient on its own to ensure sustainable management of resources and materials for a number of reasons. Because of this, a circular economy strategy also aims to reduce and slow down the flow of resources into the human economy.

To achieve this, it will be necessary to increase recycling, encourage reuse, develop a market for recycled materials, and redesign goods with end-of-life considerations. This method emphasizes the necessity for enabling conditions, including favorable government policies and regulations, for such changes to materialize, while framing the problem of moving away

from the current linear economy primarily as a question of product redesign and innovation in business models.

2.1.6 Sustainable environment management on circular economy

It refers supplies resources, assimilates wastes, sustains life by providing genetic and bio diversity and provides aesthetic services.

It consists preventing misuse and degradation of habitats and biota while allowing waste products from human activities to reappear and replenish natural systems. The contamination of materials with compounds that harm the environment must be avoided in order for this to be possible. The challenge is to retain technology materials like plastics in the economy for as long as is practical, including by the adjusting the need in mining and production the virgin materials; instead, the life cycle of products is extended. Sustainability couple with circular economy in the way it refers make the resource be using at long time without the life of future generation.

2.2 Theoretical review

Theoretical review provides the foundation for understanding the role of civil society in promoting a circular economy for sustainable plastic waste management in Bamako City. This review examined relevant key theories related to this topic.

2.2.1 Circular Economy Theory:

The concept of a circular economy emphasizes the need to reduce waste, reuse materials, and recycle resources to create a closed-loop system. Key principles include minimizing resource extraction, extending product lifecycles, and fostering innovation in eco-design. (Babaremu, 2022) has stirred the relevant literature pool to extract some of the creative efforts that have been made to reroute the potential of plastic waste into useful applications like horticulture in agriculture, engineering and building construction, and the most cutting-edge application, 3D printing with plastic filaments.

In keeping with technological trends, 3D printing represents a gray area for plastic recycling; it's pricey, but it's worth investigating. Regarding the role of civil society in circular economy plastic waste management, it's important to acknowledge the existence of critics who argue that the circular economy might divert attention away from the underlying causes of pollution and plastic consumption, which have had widespread negative environmental impacts. Organizations such as Story of Stuff, Break Free from Plastic, GAIA, and Local Futures are noteworthy in their global efforts to go beyond mere recycling calls and instead focus on the reduction and eventual elimination of plastics, as emphasized (Monbiot, 2018).

Notably, in low and middle-income countries (LMICs), the adoption of circular economy solutions is showing promise, albeit in its early stages. This approach centers on waste separation at the source, heightened awareness of resource usage, the emergence of recycling innovations, and the promotion of small-scale initiatives for plastic recycling, as outlined (Pagliaro, 2020). It is noteworthy that plastic waste can be transformed into valuable items such as toys and bags, in circular economy program as demonstrated by Angeles-Hurtado in 2021. Plastic waste has significantly contributed to environmental degradation. Therefore, it is imperative to implement circular economy policies that prioritize recycling household waste as a means to mitigate the adverse impacts of pollution, as supported by the studies of (Sadat-Shojai and Bakhshandeh , 2011) and (Sahin, 2018). While there have been innovative initiatives aimed at recycling plastic waste through large-scale industrial processes, these efforts have led to the creation of new plastic products, resulting in a growing challenge of classification and management. Instead the whole policy must frame by the state supporting by Civil Society pressing.

The World Economic Forum made the argument for reconsidering plastics, beginning with a new packaging model backed by the circular plastic economy, and said that the new plastics economy necessitates a new approach.

The consumers and producer have to make new package model and reusing tool in the circle; According to the analysis, switching to a circular model might result in an economic opportunity of \$706 billion, with packaging playing a major role (WorldEconomicForum, 2016).

2.2.2 Stakeholder Theory

Stakeholder theory posits that organizations should consider the interests and perspectives of various stakeholders, including civil society, when making decisions. It offers insights into how civil society organizations can engage with businesses, government agencies, and other stakeholders to promote circular economy practices in plastic waste management.

2.2.3 Social Movement Theory

Social movement theory explores how civil society groups mobilize collective action to influence social and environmental change. It helps us understand how advocacy campaigns, public awareness initiatives, and community organizing efforts contribute to the adoption of circular economy principles.

2.2.4 Policy Advocacy and Entrepreneurship:

Civil society organizations often engage in policy advocacy and entrepreneurship to shape government policies and regulations. Theoretical insights into policy change and advocacy strategies can inform our understanding of how civil society influences plastic waste management policies and practices in Bamako City. Moving toward a circular economy will necessitate coordinated policy interventions at all points in the life-cycle of plastics, including resource extraction and use, product design and manufacturing, trade and retail, use, recycling, and final disposal when necessary. The ability to develop and implement public policies that are more integrated and coherent is essential to approaching plastics from a life-cycle perspective (Bengtsson, 2019).

Another had conducted a critical analysis of Managing Solid Waste practices in India and discovered that the main issues were underestimating generation rates and, consequently, the need for resources, lacking technical and managerial inputs, lacking trustworthy and up-to-date information, and for this approach to waste management leading to inefficient resource utilization (Goel, 2008). By the way contend that the "command-and-control" method of waste reduction needs to be replaced with "polluter pays" and economic incentives. This can be a step toward incorporating the general people in solid waste management and serves as inspiration for creative thinking about ways to manage solid waste that are less expensive and more practical (Shan Shan Chung and Chi Sun Poon, 2001). Similar to this, (Parrot, 2009) covered the legal, economic, and practical facets of plastic management in the Cameroonian capital city of Yaounde. They identified accessibility, infrastructure quality, and transportation distances, as key variables in the decision-making process, for waste collection in this city. In respect to recycling, (Omran, 2009) looked into household attitudes on recycling solid waste in the Malaysian state of Kedah.

The government should promote markets for recycled materials and raise the professionalism of recycling businesses in order to enhance recycling rates according to (Minghua, 2009). Furthermore thinking about circular implementing it is well understanding its four major theories.

2.2.5 The theory of recycle

It is about converting the plastic in case of Mali in fuel or stones among other. This is an important effort, as in this process, we not only inputs plastic the load of garbage as well as conserve natural resources also. It is the most emerging policy using in Mali on circular plastic waste (Biaise, 2006).

2.2.6 The theory of reusing

The theory consists of exploiting again in several times and promote the lesser production of plastic. There are unquestionably recyclable objects in our rubbish. Reusing waste materials entails reusing them rather than throwing them away. It is advisable to store additional items in items like pickle bottles and plastic containers. Additionally, we can reuse chocolate boxes, wrapping paper, and cardboard boxes. One can donate used clothing to those in need. For shopping, cloth bags are preferable to plastic ones. Purchasing reusable things like rechargeable batteries, phone accessories are using by the repairs of phone generation. The household and, cooperative group are reused bottles items in their production juice.

2.2.7 The theory of reduce

This theory consists minimizing the use of plastic as much possible by incinerating, segregating dusting, aware people; Consumers can take the following main actions to minimize waste: (i) Choosing stuff you need rather than want, (ii) Purchasing high-quality goods, (iii) Sing minimal packaging and (iv) Purchasing local goods

2.2.8 The theory of refuse:

In one word, it is “say no”, to what you do not need in primary way to lower our impact. As well as for Africa (ONIBOKUN, 1970) who argued the active participation of population in the system in collecting, selecting developed longtime in informal aspect which could creating employs, and aid for enhance environment management and answer the questions about the cost of technical treatment of wastes.

2.3 Empirical review

The empirical review provides an overview of existing research, case studies, and data relevant to the role of civil society in promoting circular economy practices for sustainable

plastic waste management in Bamako City. Environmental scientists are currently researching the empirical on plastic waste management influenced by civil society.

Only 14% of the plastic packaging used globally is recycled, while 40% end up in landfills and 32% in ecosystems (the remaining 14% are used for incineration or energy recovery) detailed on a report (EllenMacArthur, 2017). This is more than 40 years after the introduction of the first universal recycling symbol. A major rethink is necessary to get society away from the "take, make, dispose" mentality that has long inspired corporate strategies.

2.3.1 Case Studies of Civil Society Initiatives

Environmental experts are actively investigating how civil society has influenced the management of plastic garbage. In Burundi after the conflict, Dukingirikibira was born and established by women group organization,, which means "let us protect our forest," to collaborate on protecting the forest that had provided for them while they fled the fighting (UNDP, 2019). There has been a corresponding rise in academic interest in the function and effect of civil society actors in global policymaking. In contrast to the nearly 10,000 civil society representatives who were accredited to the UN Conference on Sustainable Development held in Rio de Janeiro four decades later, only 250 nongovernmental organizations (NGOs) attended the first UN global summit on the environment in Stockholm in 1972. In Bamako city, at sector level there are few civil society policy on practice circular economy apart collecting plastic waste and sell (JCICIWARA, 2016); the majority of household and women local group reuse plastic waste to pack local juice. Examine specific initiatives and projects undertaken by civil society organizations in Bamako City related to plastic waste management within a circular economy framework. Highlight successes, challenges, and lessons learned from these endeavors.

2.3.2 Stakeholder Engagement

This part of the study orients how civil society organizations engage with key stakeholders, including government agencies, businesses, and local communities, to promote circular economy practices involves examining various aspects of stakeholder engagement strategies. The circular economy is an economic model that aims to minimize waste and maximize the value of resources by promoting recycling, reusing, and reducing resource consumption. Effective stakeholder engagement is crucial in achieving these goals.

Stakeholder engagement is fundamental in advancing the circular economy agenda. Civil society organizations play a pivotal role in facilitating this engagement by acting as intermediaries between diverse stakeholders.

2.3.2.1 Government Agencies:

Civil society organizations often engage with government agencies to advocate for supportive policies and regulations. This involves participating in policy development, providing recommendations, and monitoring policy implementation. The degree of engagement varies, with some organizations having formal partnerships or consultative roles.

2.3.2.2 Businesses:

Engaging with businesses is critical for promoting circular economy practices. Civil society organizations work with companies to encourage sustainable product design, waste reduction, and resource-efficient production. Initiatives include collaborative projects, workshops, and certification programs.

2.3.2.3 Local Communities:

Civil society organizations engage with local communities to raise awareness about the benefits of circular economy practices.

They may organize community events, workshops, and educational campaigns to promote recycling, upcycling, and waste reduction at the grassroots level. Civil society organizations often use advocacy to influence government policies and corporate practices (Charnovitz, 1997; Scholte, 2002). This can involve lobbying, public campaigns, and collaborative initiatives to drive change. Capacity building programs help stakeholders understand the principles and benefits of the circular economy. Training, workshops, and educational materials are used to enhance knowledge and skills. Actually in the country many local group especially girls and women are beneficiate NGOs program in managing plastic waste by collecting and reuse despite the effort are not correlated and less encouraging by the consumers of reused plastic waste. They argued that those plastic waste in another use are not hygienically good for their health. Future efforts should focus on community-based programs that educate and incentivize citizens to segregate and recycle plastic waste. Community-led initiatives, such as waste collection drives and awareness campaigns, can effectively involve residents.

2.3.3 Lessons Learned and Best Practices:

The success of circular economy initiatives for plastic waste management in Bamako City heavily depends on active participation and engagement of local communities. Empirical evidence shows that when residents are involved in waste collection, sorting, and recycling processes, the impact is more significant (Babaremu, 2022). Lessons learned from the empirical evidence on involving civil society in circular economy initiatives for sustainable plastic waste management in Bamako City, along with best practices and strategies that can inform future efforts is necessary.

Public-Private Partnerships are not effective in Mali. Collaborative efforts involving civil society organizations, government agencies, and private sector stakeholders have not proven to be effective in managing plastic waste sustainably. Public-private partnerships streamline waste collection, recycling infrastructure development, and policy implementation.

Future initiatives should prioritize the formation of partnerships between civil society organizations, local businesses, and city authorities. Such partnerships can share responsibilities, pool resources, and drive comprehensive plastic waste management strategies, including recycling facilities and waste-to-energy projects.

Empirical evidence underscores the significance of public education and awareness campaigns in changing attitudes and behaviors toward sustainable plastic waste. People need to understand the environmental and health implications of plastic pollution and the benefits of recycling.

Future efforts should allocate resources to educational programs that inform the public, especially schoolchildren, about the importance of responsible plastic waste management. Campaigns, workshops, and media outreach can raise awareness and drive behavior change, contributing to a more sustainable approach to plastic waste. These lessons, along with the highlighted best practices and strategies, should guide future efforts in addressing the pressing issue of sustainable plastic waste in urban areas like Bamako City. Thus illustrating the low rate and less participation of civil society on environment management.

In addition, (EllenMacArthur, 2017) find out three major strategies in plastic circular economy as: (i) about 30% of plastic packaging will never be reused or recycled without radical redesign and innovation, (ii) second, for at least 20% of plastic packaging, reuse offers an economically appealing option (iii) thirdly, recycling would be economically viable for the remaining 50% of plastic packaging with coordinated efforts on design and after-use

systems. They are researching the effects of managing plastic garbage in various ways on the ecosystem. The study concluded that the management of plastic trash has a variety of effects on the environment, with pollution being the biggest of these effects. Then according to a recent global research, the plastics industry alone might consume more than 15% of the global carbon budget by 2050 under business as usual conditions (Zheng, 2019).

2.4 Research Gap

Despite the acknowledge about potential of Civil Society through Circular Economy as a tool for plastic waste management and empowerment, both NGOs and CBOs policies in Bamako is not enough clarify. The research was limited on how to determine both collecting and recycling waste. Instead few on the other reusing, refusing. There is lack of involving local community actors than private sector through cooperative women group (Biaise, 2006). Although some studies have shown that circular economy by recycling programs on plastic waste management in Bamako have been successful in increasing the access of poor communities to financial services and resources, and arise the economic empowerment of women, and rural young despite the complex context. In addition, international agreements are still ratifying by nations, however the fact that national governments do not work hand to hand with civil society, as well as other actors from the private sector and governmental world are leading the full process.

Mostly scholars argue Plastic waste have different impacts on the environment and cannot fit only on collecting and recycling. Therefore, there is a critical research gap in understanding the lack of CBOs and NGOs involving in awareness and their advocacy way on implementing law which are being empowered through their participation in policymaking, implementing, and evaluating, as well as the challenges that they face in accessing and utilizing these financial services as benevolent.

In addition, also the policy of plastic waste management through Circular Economy is covered not only recycling but more than one shape. This study aims to fill this gap by investigating the participation rate, socio-economic development policies, and challenges faced by local Community organization when they participate in the plastic waste management program in Bamako.

2.5 Conceptual Framework

A conceptual framework is a written or visual representation of an expected relationship between variables. Variables are simply the characteristics or properties that you want to research. The conceptual framework is generally developed based on a literature review on existing problem and theories about the topic. It's a structure that outlines and clarifies the key concepts, variables, relationships, and assumptions involved in a research study. It helps to identify the research problem, develop hypotheses, and guide data collection and analysis. The conceptual framework provides a visual representation of how the researcher understands the interrelationships between the variables, and it allows the researcher to communicate their understanding of the research problem and their approach to addressing it. (Huberman , 1994), the conceptual framework is essential in any research study as it provides a roadmap for research, helps researchers to make sense of the data collected, and provides a basis for interpreting the results. As it is being shown in Figure 1 and later interpreted and interlinked, this subject under study consists of the independent variable, dependent variable, intervening variable and mediating variable.

Before starting collect data, constructing a conceptual framework to show exactly which variables measured and how it expects them to relate to each other is important. A conceptual framework can be designed in many different ways. It takes the form which depends on what kinds of relationships it expects to find.

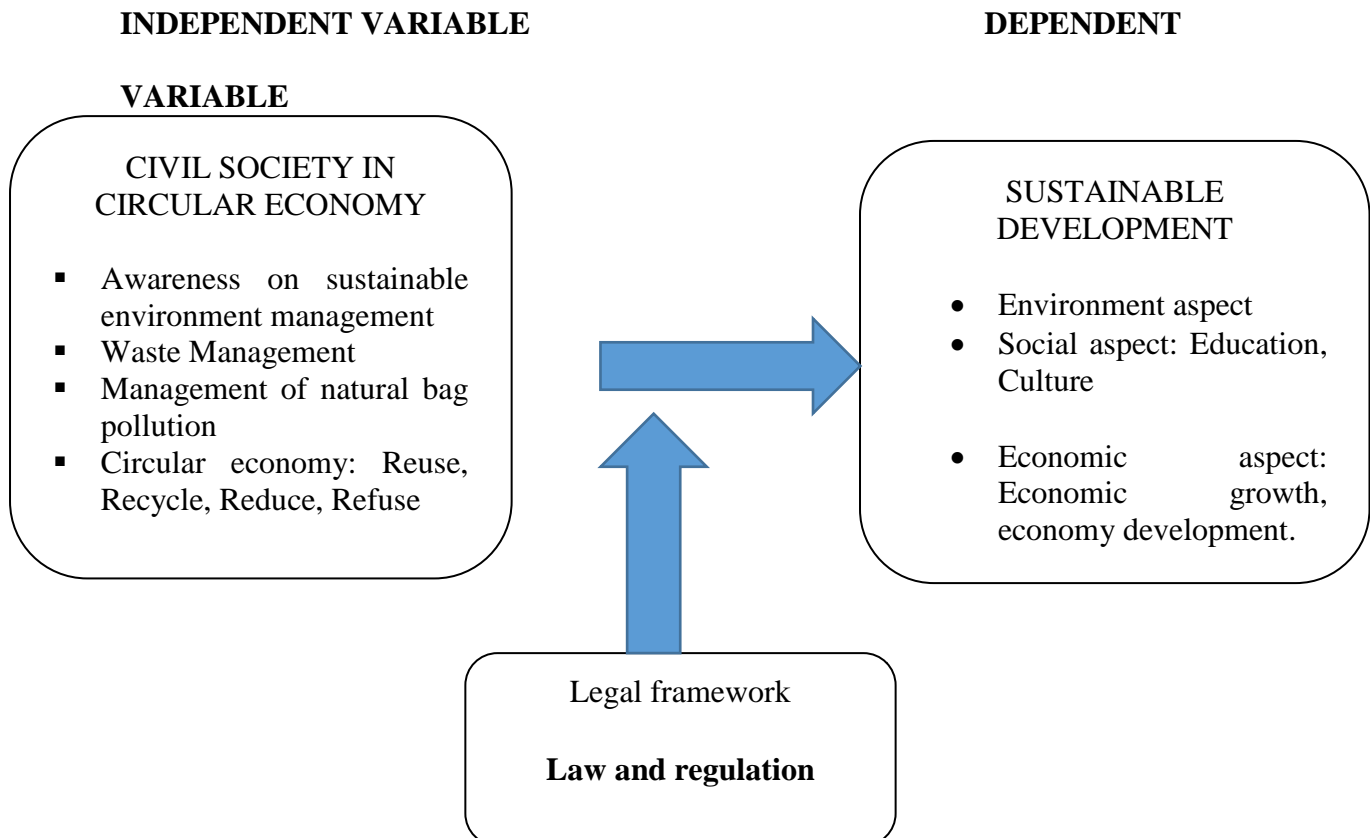


Figure 1: Conceptual Framework design, 2023

2.5.1 Independent variables:

If we want to test a cause-and-effect relationship, we need to identify at least two key variables: the independent variable and the dependent variable in our example (Creswell, 2009). The expected cause, “Civil Society on Waste Management” is the independent variable (the predictor or explanatory variable). The expected effect, sustainable Environment development,” is the dependent variable (the response or outcome variable).

In other words, the sustainable environment development depends on certain kinds of role from Civil society organizations on waste management” and the intermediary variable is Circular economy framework.

Our hypothesis is that the more involving civil society on waste plastic management through Circular Economy drives to Sustainable development in Bamako city.

Causal relationships often involve independent variables that affect the dependent variable by extraneous Variables.

To visualize our expected cause-and-effect relationship, we will use the basic design components of boxes and arrows. Each variable appears in a box. To indicate a causal relationship, each arrow should start from the independent variable (the cause and point to the dependent variable effect to include inter mediators, and control variables.

2.5.1.1 Awareness on circular economy in environment management:

In order to raise awareness within community about the importance of using circular economy policies for plastic waste management, there are a few steps that can be taken:

(i) Education and Information: Providing accurate and accessible information about the benefits of circular economy practices in managing plastic waste is crucial. This can be done through awareness campaigns, workshops, seminars, and educational materials.

(ii) Collaboration and Engagement: Engaging civil society organizations, community groups, and individuals in the decision-making process can help foster a sense of ownership and responsibility. Encouraging their active participation in discussions, policy development, and implementation can create a sense of empowerment and commitment.

(iii) Demonstrating Success Stories: Highlighting successful examples of circular economy practices in plastic waste management can inspire and motivate civil society. Displaying real-life case studies and sharing the positive impact of such initiatives can encourage others to adopt similar approaches.

(iv) Promoting Sustainable Alternatives: Encouraging the use of sustainable alternatives to single-use plastics, such as reusable bags, bottles, and packaging, can help reduce plastic waste. Providing information about these alternatives and their availability can empower individuals to make more environmentally conscious choices.

(v) Advocacy and Policy Support: Civil society can play a crucial role in advocating for policies that promote circular economy practices in plastic waste management.

This can involve lobbying for stricter regulations, supporting initiatives that incentivize recycling and waste reduction, and raising awareness among policymakers about the importance of sustainable practices.

By implementing these strategies, civil society can effectively raise awareness and promote the adoption of circular economy policies for sustainable management of plastic waste in Bamako.

2.5.1.2 Waste Management

When discussing the role of civil society in the circular economy for sustainable environmental management, waste management can be seen as also an independent variable. Trash management refers to the procedures and plans used by people, groups, and institutions to handle, process, treat, and dispose of trash in a manner that is environmentally friendly.

In the context of the circular economy, waste management plays a crucial role in minimizing the generation of waste, promoting recycling and reuse, and reducing the overall environmental impact. Civil society, which includes non-governmental organizations, community groups, and individuals, can actively participate in waste management initiatives by advocating for sustainable waste management practices, organizing recycling programs, and raising awareness about the importance of reducing waste.

By effectively managing waste, civil society can contribute to the circular economy by ensuring that valuable resources are recovered, recycled, and reintegrated into the production cycle. This helps to minimize the extraction of raw materials, reduce energy consumption, and mitigate environmental pollution.

2.5.1.3 Management of natural bag pollution:

The management of natural bag pollution by civil society plays a crucial role in achieving a sustainable environment. When it comes to natural bag pollution, civil society can take several actions to promote a sustainable environment as:

(i) Awareness and Education: Civil society can combat natural bag pollution through awareness campaigns and educational programs, promoting the use of reusable bags to instigate positive environmental behavior change.

(ii) Advocacy and Policy Change: Civil society can influence policies to mitigate natural bag pollution, advocating for bans on single-use plastic bags, promoting eco-friendly alternatives, and supporting reusable bag adoption initiatives.

(vi) Community Engagement: Civil society can engage with local communities to promote sustainable practices and provide resources for proper waste management. This can involve organizing clean-up drives, establishing recycling programs, or collaborating with local businesses to promote the use of eco-friendly bags.

(vii) Collaboration and Partnerships: Civil society organizations can collaborate with government agencies, businesses, and other stakeholders to develop comprehensive strategies for managing natural bag pollution. By working together, they can leverage resources, share knowledge, and implement effective solutions on a larger scale.

(viii) Research and Knowledge Sharing: Scholars within civil society can conduct research on the impact of plastic bag pollution and share their findings with the public and policymakers. This research can help inform decision-making and drive further action towards a sustainable environment.

Overall, the management of natural bag pollution by civil society is essential for creating a sustainable environment. Through awareness, advocacy, community engagement, and collaboration, civil society can contribute to reducing the environmental impact of single-use bags and promoting the use of more sustainable alternatives.

2.5.1.4 Circular Economy as dependent Variable

A circular economy promotes sustainable resource use and waste reduction. Civil society plays a vital role through advocacy, education, and active engagement. Sustainable plastic

management, including waste reduction, recycling, and alternative materials, is a key focus. Civil society spreads awareness, advocates for supportive legislation, and participates in recycling programs. Youth, women, and faith organizations are pivotal actors. Together, civil society and circular economy principles work toward sustainable plastic management, mitigating environmental impact and fostering a healthier future.

2.5.2 Intermediary Variable

Now we will expand the framework by adding an Intermediary Variable. An Intermediary is the effect that an independent variable has on a dependent variable (Creswell, 2009).

The Intermediary variable thus changes the effect component of the cause-and-effect relationship. This Intermediary is also referred to as the interaction effect. In our example, we expect that by adding the mediating variable, the “**legacy framework on environment management in Mali**” we will help to explain the cause-and-effect relationship between the two main variables. Keep in mind that mediating variables can be difficult to interpret, and care must be taken when conclusions are drawn from them (Creswell, 2009). However, that the responsibility for creating and implementing such frameworks typically lies with government bodies and regulatory agencies. They establish laws (decree, organs) and regulations to address plastic waste management, including recycling, waste reduction, and proper disposal practices. For instance, the civil society find a guideline and national support in their actions and, which carry out circular economy policy for sustainable management on plastic waste in Bamako City.

Civil society, on the other hand, plays a crucial role in advocating for sustainable plastic waste management practices and holding both the government and businesses accountable. They can raise awareness, engage in community initiatives, and collaborate with relevant stakeholders to promote sustainable solutions.

Thus the intermediary variable is the legal framework on circular economy policy that outcome the dependent variable cited above.

2.5.3 Dependent Variables

A dependent variable is one that is altered because of the modification of an independent variable. Your independent variable "depends" on the outcome you are interested in measuring. Regarding our topic Civil Society (Young, Women, and Faith Organizations) on plastic management to reach out sustainable development depend on the following point:

2.5.3.1 Social aspect

In especially from a societal perspective, civil society is essential to managing plastic in a sustainable way. The contribution of civil society is high regarding, first those young, women group and community faith organizations, which are born from the society. In addition, they interact with decision-makers, take part in consultations, and advocate for the adoption of practical strategies to lessen plastic waste (Carolyne, 2019). Young women's organizations collaborate closely with neighborhood communities to combat plastic pollution issues. To encourage responsible plastic disposal and advance alternatives to single-use plastics, they plan clean-up campaigns, recycling drives, and community-based projects, all is considered as form of Circular Economy.

In other hand, they foster partnerships to implement recycling programs, promote circular economy models, and support initiatives that reduce plastic waste.

Especially at social level youth, women and Faith organizations in Bamako empower individuals and communities by providing them with the knowledge and tools to make sustainable choices. They promote behavior change, encourage the adoption of eco-friendly practices, and support initiatives that create employment opportunities in the sustainable plastic management sector.

Overall, civil society's contribution in sustainable plastic management from a social aspect is vital in creating awareness, driving policy change, engaging communities, fostering collaboration, and empowering individuals to make a positive impact on plastic pollution.

2.5.3.2 Economic aspect: Economy growth through Sound chain process

Engaging young and women groups in the Sound Value chain process for sustainable plastic management in Bamako City brings multifaceted economic benefits. By assisting countries and regions in redefining economic policies and practices around sustainability, the Partnership for Action on Green Economy (PAGE) has expanded into a well-known coalition of five UN agencies, eight funding partners, and twenty-two partner countries (Worldcirculareconomyforum, 2022). Firstly, it creates job opportunities, alleviating unemployment and enhancing economic conditions locally. Secondly, it fosters skill development in plastic management, bolstering employability and economic growth prospects. Additionally, it encourages entrepreneurship and small business development, sparking innovation and economic independence. Furthermore, it provides market access and value addition by transforming plastic waste into marketable products, curbing pollution and generating income. Lastly, it fuels advocacy and awareness efforts, as young and women groups become catalysts for responsible plastic use, recycling, and waste reduction.

The \$15 million project unites stakeholders from the public, commercial, and civil society sectors of the electronics value chain to establish a financially viable circular economy strategy for Nigerian electronics, safeguarding the environment and generating secure jobs for thousands of Nigerians. In United States the plastic manufacturing generates 4.51 billion per year in shipment and producing 2.5 million job. If correlated to Bamako production which is around 2 million ton the city will approximatively create 36 090 jobs furthermore amplify by redesign supply chain policy (Associations, 2018).

The plastic waste is a valuable resource and amplifies the opportunity through circular economy to the sustainable plastic management can offer a wide array of economic advantages contributing to environmental sustainability in Bamako City.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter explains and justifies the methodology used in order to fulfill the objectives of the study. Methodology is a set of methods and principles that are used when studying a particular kind of work or subject (Dictionnaire, 1995). This chapter's goal is to discuss the study's methodology, including the procedures employed. The study population is included. Additionally, it outlines the strategies and methods utilized in the selection of samples and data gathering. It goes on to discuss how the data was gathered, prepared, and eventually evaluated to provide the implications of the results.

The chapter provides methods adopted during the study and explains the research design, analytical framework, and sources of data, data collection instruments, and sampling techniques.

3.1 Research Design

According to John (2003) the research design is a plan for study used as a guide in collecting and analyzing the data. This study used descriptive and correlational designs. In addition, the design of a research is the combination of methods you have chosen for empirical part of your study. It is worth noting that the choice of a research design is contingent upon choice of research approach whereby research is either quantitative or qualitative. The researcher combined both quantitative and qualitative research design in carrying out this study.

3.2 Study area description

Geographical location is Bamako district are the place of most waste rate, also far at 80km to researcher's residence (Ouésèsébougou). Then this took more time, efforts and energy to collect data from a place different from the researcher's area.

The way that the different NGOS and CLOs field is wide and the different waste-depositing zone targeted (Lafiabougou, Medina Coura, Badalabougou) in general and the researcher's area in particularly affected the researcher a manner that the collect was tiring.

In order to overcome that, the researcher could spend many times to check on field someone people and group who agree respond (girls) and their office. Almost are not at the address that they used to register the organization. Allocating the appointments to be fulfilled on time, the head of sector contributes a lot by orienting and organizing in some case the appointment. Allocating the part of their time that was around one hour without any stipend was hard. One of the strategies that allowed us to succeed and face this challenge was to respect time so that the people could leave earlier and do something else.

3.3 Target Population

Grinner & William (1990) defined population as all members or elements, human beings, animals, trees, objects, events, etc. of a well-defined group. That is, Population means all the elements in a well-defined set of values. It considers the NGO (OSADL, ALAM, and Cooperative SiguidaDjeya, ASACOKALACI, Cooperative Balemaya, FID Mali), Faith Organizations (“Allahkamaton”) which intervene in Bamako City on the plastic waste management makes up the population of this study.

Since the population is large, it was not easy to reach all of them due to the financial and time constraints a sample and therefore drawn as shown below.

3.4 Sampling methods

The study used simple random sampling technique. This technique provides a natural starting point for a discussion of probability sampling methods, not because it is widely used, it is not, but because it is the simplest method and it underlies many of the more complex methods.

Simple random sampling technique was applied to give each individual in the population equal chance of being selected and reduce costs and time and increase the degree of accuracy of the study.

3.4.2.1 Data Collection Methods

Data collection includes the activity of gathering facts or information about a subject under the research study. After formulating research instruments and sampling tools, the researcher informed respondents about the research and its intentions. A covering letter explaining the purpose of the study was attached to the research instruments in which it is used to introduce the study to the respondents, an introduction statement at the top of the questionnaire guided the respondents on how to answer the questionnaire and give the assurance of confidentiality.

The completed questionnaires were picked after being appropriately and fully responded. Permission to obtain and use these documents was adequately sought from the respondents with the assurance of their safety and confidentiality. This created a good interaction process between the researcher and respondents and consequently getting sincere responses from them (Cronbach, 1951).

3.4.2.2 Survey questionnaire

The researcher used the questionnaire to collect data. A questionnaire is a data collection tool that is commonly used in social science research to gather information from study participants (Fowler, 2013). In this study, a questionnaire will be used to collect data from the members of youth and women organization groups as development Community Sector and in addition community faith organization. The questionnaire consisted of closed-ended questions, which limit the responses to a set of predetermined choices, and will be administered face-to-face.

The questionnaire was designed to gather information from all the study objectives. The use of closed-ended questions in the questionnaire is justified by the fact that they are easy to answer and facilitate data analysis, as the responses can be easily quantified and summarized. Additionally, face-to-face administration of the questionnaire allowed the researcher to clarify any questions and ensure that the respondents understand the questions.

3.4.2.3 Interview

Key informants from interviews were used to elicit in-depth information on the study aspects. A guide was drafted to orient the collection of information. The selected persons will include members of:

- (i) Community Local Organization member.
- (ii) Community Local Organization leaders,
- (iii) Community Faith Youth organization, etc.

The use of interviews in this study is justified by the need to obtain in-depth and nuanced information on the participants' experiences, perceptions, and opinions. The interview provided a platform for the participants to share their views and experiences, enabling the researcher to gain a deeper understanding of the issues under investigation.

3.4.2.4 Documentation

Documentation refers to any written or recorded materials that provide information relevant to the research question, such as reports, meeting minutes, or program documentation (Patton, 2015). In this study, the researchers will use program documentation, reports, online files, etc.

According to (Kothari, 2008) a questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms.

The researcher used the questionnaire to collect quantitative data because of its low cost, it is less free from bias, respondents have adequate time to give well thought out answers and large samples can be made use of and thus the results can be made more dependable and reliable (Kothari, 2008). Questionnaire is commonly used to obtain data about population, since each item is developed to address a specific objective, research questions or objectives of the study (Mugenda, 2003)

The type of questionnaire that was used in this study is Likert scale to obtain data in various prospective of the research. Instructions as how to answer the questions are provided to facilitate respondents to give appropriate answers for all the research questions.

3.4.2.5 Administration of Data Collection Instruments

The purpose of data collection is to obtain information to keep on record, to make decisions about important issues, or to pass information on to others. Data are primarily collected to provide information regarding a specific topic (Cronbach, 1951).

The study was conducted using the survey method of research and only quantitative techniques were used. The respondents were met at their working places including office and by email; traders conduct their daily activities and were given questionnaires. The researcher passed through the same place to collect the answered questionnaires.

3.4.3 Reliability and Validity

This section explains the validity and reliability of research instruments. This enables the reader of the study to have additional information on how solid were the instruments used.

3.4.3.1 Testing the Validity of Research Instruments

This indicates that the research methodology yields information that is pertinent to the subject. As a result, it serves as a test to determine whether the study methodology genuinely measures the variables that it claims to (Kombo, 2006).

The degree to which differences detected by a measuring tool accurately represent actual differences between the groups being evaluated is known as validity. The researcher determined the content validity using the Content Validity Index (CVI) formula to evaluate the reliability of the study instrument.

3.4.3.2 Testing the Reliability of Research Instruments

The consistency of test results is a measure of reliability (Kombo, 2006). If you give a subject the same score on two occasions after giving them the identical test, that is a measure of reliability; A pre-test in the field and a pre-coding were conducted to evaluate the applicability of the research instruments and the results they would produce in order to test the liability of the data collection instrument. The pre-test, which involved 18 CFOs and 20 households, was conducted in Badalabougou Commune 5.

(Kombo, 2006) asserts that the coefficient must be 0.7 or higher to vouch for the instrument's dependability. The calculation using SPSS produced the following outcomes:

Table 1: Results of reliability test

Cronbach's Alpha	N of Items
0.88	38

Source: Primary data, 2023

The results in Table 3.3 show that the coefficient of the reliability test is 0.88. This result certifies that the instrument is reliable as the obtained coefficient is above 0.7 taken as the certification line.

3.4.3.3 Data Analysis Procedure

As input, primary data were collected from the respondents in sampled beneficiaries and employees. In addition, secondary data were obtained from the existing documents. Data were organized in a more meaningful and interpretive way to attain the study objectives. After the collection from the field, data were entered into a computer to allow easy interpretation and analysis. The study employed descriptive statistical tools to analyse quantitative data obtained from the study.

As output, after the data collection is completed Quantitative data were presented in tables and narratives. Qualitative data were entered into a compilation sheet from which themes are identified. Each theme was transferred into a master sheet from which the analysis was done in relation to objectives of this study. Qualitative data were presented in form of narratives with verbatim reporting so that some strong feelings of respondents can be reported as they are.

Concerning the four objectives of the study, using a Likert scale, frequency and mean were analyzed on each question. The mean on each item was calculated by multiplying the frequency of each response category and dividing the value obtained by the total number of responses.

$$\bar{X} = \frac{\sum fx}{N}$$

Where,

- Σ = Summation sign
- F = Frequency
- X = Nominal
- N = Total number of response
- \bar{X} = Mean value.

Therefore, the mean cut-off is 3. Any item with below 3 falls below average and should be considered negative, vis-à-vis.

Table 2: Scale of Responses

Likert scale	Weight	Likert scale	Weight	Likert Scale	Weight
SA: Strongly Agree	5	SE: Strong Experience	5	More	Significant
A: Agree	4	E: experience	4	Less	No significant
N: Neutral	3	N:Neutral	3	None	Inexistent
D: Disagree	2	WE: Weak Experience	2		
SD: Strongly disagree	1	NE: None experience	1		

Source: Researcher's design 2023

3.5 Limitations of the study

The first limitation is that most urban household heads are illiterates and this is why the researcher used both the questionnaire and the interview guide. This required making long instances looking for respondents especially during meetings and in fact spending much time explaining questions to them. Lastly, the researcher selected only 78 respondents. It would have been much better if this number was increased to make it more representative, but doing this would have required extra resources in term of finance that were unavailable to the researcher's disposal.

However, the researcher considered this sample size to be representative as respondents was randomly selected using the systematic random sampling technique.

3.6 Ethical considerations

There are a number of key phrases, which describe the system of ethical protections. Then the contemporary social and medical research establishment has created to try to protect better the rights of their research participants. The principle of voluntary participation requires that people not be coerced into participating in research.

This is especially relevant where researchers had previously relied on 'captive audiences' for their subject's prisons, universities, and places like that. Those who participated in this study did on their willingness to help the researcher and have not been coerced to do so. Closely related to the notion of voluntary participation is the requirement of informed consent. Essentially, this means that prospective research participants must be fully informed about the procedures and risks involved in research and must give their consent to participate. Ethical standards also require that researchers not put participants in a situation where they might be at risk of harm because of their participation. Harm can be defined as both physical and psychological. Two standards have been applied in this study in order to help protect the privacy of research participants. We guaranteed the participants confidentiality. They are assured that identifying information will not be made available to anyone who is not directly involved in the study. The stricter standard is the principle of anonymity that essentially means that the participant will remain anonymous throughout the study and the participants to this study obtained this guarantee.

CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The information gathered from the respondents is presented, analyzed, and discussed in this chapter. Respondent profile, Effect of the youth, women's local groups, and Community Faith Organization on Plastic Waste Management through circular economy are some of the subsections here.

4.1 Profile of Respondents

A total of 95 questionnaires were created, distributed to the sampled respondents, returned at the conclusion of the data gathering process, coded, and analyzed. The data relevant to respondents' profiles both informal and formal, including gender, age, educational background, and position, are summarized in the table below.

4.1.1 Gender

The distribution of respondents by gender shows how many men and women took part in this study, from which initial data were gathered.

Table 3: Respondents Gender

Respondents' gender	Formal Organization		Informal Organization	
	Respondents	Percent	Respondents	Percent
Male	58	61	73	77
Female	37	39	22	23
Total	95	100.0	95	100.0

Source Field data, 2023

The data in Table 3 show that out of the 95 respondents given questionnaire, 61.05% of respondents were male while 38.95% were female showing the preeminence of men in Civil society organization in implementing sustainable plastic waste activities in formal.

About this issue, information obtained from respondents showed that the reason of the presence of male in formal CSOs than actors on informal such number is explained by the fact that in general men are more educated and gender stereotypes and involved on local communities' management activities than women. Furthermore, having investigated men and women allowed the researcher to consider the differences of opinions and these were considered significant for some indicators.

4.1.2 Respondents' age

The researcher also gathered information on the respondents' ages, who served as the source of the original data. It is best to work with people who are mature and have demonstrable knowledge or information on the topic area for a case study like this in order to recollect information from the encounter. The ages of the respondents were divided into age groups with predetermined intervals to facilitate data processing.

Table 4: Respondent's age

Respondents' age	Number of respondents	Percent
less than 18	13	13.7
18-25	55	57.9
over 25	27	28.4
Total	95	100.0

Source: Field data, 2023

Concerning age, the respondents were concentrated over between 18 and 25 years (57.9% of all respondents) while the respondents who have less than 18 years were 13 only (13.7%).

For the interval of above 25 years, the respondents were 27 (28.4% of all respondents).

From this observation, the researcher believes that the reason for the predominance of group 18-25 compared to others is related to the fact that the target population included the youth, women local organization (community of local development) and faith organization (Mosques and Church) are the actives old. Normally, those civil societies in formal or informal status are young people and that explains why they are in this age group.

4.1.3 Marital Status of Respondent's

The marital status is also a good indicator in social studies as it informs to the social responsibility of individual in his or her family. In this study, the researcher collected and analyzed data related to the marital status of respondents.

Table 5: Marital Status

Marital status	Number of respondents	Percent	Cumulative Percent
Single	36	18.9	18.9
Married	139	73.2	92.1
Widow/er	15	7.9	100.0
Total	190	100.0	

Source: Field data, 2023

As seen in Table 5, married respondents made up the majority of survey participants (73.2%), followed by single respondents (18.9%). The percentage of responders who were widow(er) (s) is 7.9%. The majority of responders are individuals over the age of 35, and the majority of those in this age bracket are married, therefore this is warranted. It was advantageous for researchers to obtain information from responsible people who are skilled in domestic tasks due to the significant representation of married people in waste treatment operations.

4.1.4 Respondents' educational backgrounds

The respondents' education level is a significant variable since it allows for the analysis of respondents' perceptions based on their level of education. In this study, the ability of respondents to remember various details about waste treatment was examined. It was found that educated people are open and have the skills to recall prior occurrences more easily. The table below shows well about it:

Table 6: Educational Level

Educational Level	Number of respondents	Percent	Cumulative Percent
Primary	13	13.7	100.0
Secondary	42	44.2	86.3
University	40	42.1	42.1
Total	95		

Source: Field data, 2023

Concerning education level, it was grouped into three categories: Primary, secondary and university level as shown in the above table. The results show that 41.79% have done primary schools; 43.89% have done secondary schools while 13.7% have studied in different universities. For further information, one of the respondents explained as interviewee that those who have studied in Universities are especially owners of trade companies employing those having done primary or secondary.

4.1.5 Religion aspect of Respondent

Religion can often play a significant role in shaping various aspects of society, including cultural practices, social norms, and even political dynamics. In the context of this research, understanding the religious beliefs and practices of a community can provide valuable insights into their worldview, values, and behaviors.

Religion can influence research in Mali by impacting the way people perceive and interpret certain phenomena, their attitudes towards certain topics, and their willingness to participate in research activities. It can also shape the ethical considerations and protocols that researchers need to take into account when conducting studies involving religious communities.

However, it is important to note that the weight of religion in research may vary depending on the specific research topic, the region within Mali and the local sector in Bamako City, and the particular religious groups involved.

Table 7: Religion of Respondents

Religion of Respondent	Number of respondents	Percent	Cumulative Percent
Islam	81	85.3	100.0
Christian	12	12.7	14.7
Kemite	2	2.0	2.0
Total	95	100	

Source: Field data, 2023

In Mali, a demographic composition on table 7 dressed 85.3% Muslim, 12.7% Christian, and 2% Kemite and underscores the diverse religious landscape of this study. This diversity significantly influence research dynamics, affecting participants' perspectives, attitudes, and engagement levels. Research navigates nuanced ethical considerations and tailor protocols to respect religious sensitivities, ensuring unbiased and culturally sensitive studies. Acknowledging the profound impact of religion on individuals' worldviews is crucial for fostering inclusive and respectful research practices in Mali.

4.1.6 Localization of Respondents

Position of respondents is the distribution, which indicates the number of young and women who participated in this research among the sector of the scope study, and from, which primary data were collected.

The researcher has chosen to gather information about each respondent's address and their situational factors related dumpsite or transit zone before examining the study's precise objectives.

Table 8: Number of Respondents related Residence area

Respondents by residence area	Number of respondents	Percent
Resident of Medina Coura side C1	17	18
Resident of Lafiabougou side C4	18	19
Resident of Badalabougou side C5	60	63
Total	95	100.0

Source: Field data, 2023

The results in Table 8 show that the highest 63% of the respondents are residents of Badalabougou in Commune fifth (5) side while the lowest 17% are residents of Medina Coura side and 18% in Lafiabougou Commune Three (3).

4.2 Findings related to objectives analysis of the study

The specific objectives that the study expects to get outcomes are ordered as follows: (i) Current states of civil society in plastic waste management in Bamako, (ii) Assess contribution of civil society (women and youth organizations) on circular economy policy in the plastic waste management related (Reduce, Reuse, Refuse, and Recycle) driving sustainable development in Bamako City, (iii) Challenges faced by civil society in plastic waste management in Bamako City, and (iv) Strategies that civil society can set for

addressing the challenges encountered in plastic waste management for sustainable environment at Bamako.

4.2.1 The current states of plastic waste management in Bamako

This first objective aims to analyze the current state in terms of plastic waste management and then to assess the community knowledge and the significance of local policies and regulations. In the current state of plastic waste management, civil society is at an impasse due to various factors because waste management requires the provision of adequate means that the civil society is precisely lacking in Bamako.

Table 9: Current state of plastic waste management in Bamako

Current state of PWM in Bamako (Items)=95	A (%)	D (%)	N (%)
Lack on Advocacy state and Business project and campaign	76	16	8
Lack of Skill Development Programs	81	19	0
Lack Youth, Women Engagement in Circular Economy Projects	93	7	0
Lack of Participation in Circular Economy Startups	92	6	2
Lack of legal framework and regulations	37	63	0
Lack of community cleaned up project	94	6	0
Lack of global cooperation in Circular Economy practices	12	88	0

Source: Field data, 2023

Table 9 retraces the high rate 94% where the respondents are strongly agreed about the lack of community cleaned up project and 6% simply disagree with the argument. This underlines that it is the most significant remarkable current state in circular economy by sustainable plastic waste. Advocacy state and business project are being strongly agreed at 76%, disagreed 16% agree while 8% neutral with it. There is 81% who strongly agreed with the lack of skills development program and 19% just disagreed this point.

No one both agree and disagree with the lack of framework and regulations while 37% strongly agreed and 63% disagreed.

The majority who agreed do not know the referent law. This means there is higher gap between the aware of regulations policy and the civil society activities. Regarding lack of youth, women engagement in circular economy projects 93% strongly agreed and 7% disagreed also. No one neutral, then it is drew how far the young, woman group are yet not involved in the sustainable plastic waste management policy. The young service counsel argued the delay and threat it has to make the style of someone head without being with their head. It calls the Minister of environment to revise his strategy. Saying were collected during interview. In addition, study drew the 88% agreed about the lack of global cooperation between local group and 12% disagreed. The global cooperation at local level is required to implement state policy or treat and ban the plastic. The research on book presents through EPR (Extended Producers' Responsibility) taxes, which will be used to fund products made from highly recycled trash, corporations should be held responsible for the waste they produce. Many nations have put laws, bans, and fees in place to reduce the use of plastic; for instance, Bangladesh banned LDPE (Low-Density Polyethylene) bags, Kenya announced jail sentences of four years, and South Africa did the same. However, all of these measures failed to address the exposure to plastic in some way (Khumar, 2021).

The current state on the contribution of civil society show how far is contributing and then give an overview about people who knows about the four ways in the concept of Circular economy in plastic waste management. It allows to compare and contrast different experiences, making it easier for determine more that knowledge of the sample about Circular Economy concept on sustainable plastic management in Bamako. It shapes how far the national polices related to civil society actions can achieve sustainable waste management in Mali and affecting so the capital city Bamako.

According the National Program of Sanitation (NAP.Mali, 2019) it came out that there is a lack of develop cross-level cooperation and the significant role that women and young

organization play. In fact, the study finds that it is possible to take advantage of the diversity of the sub-sector's interveners by coordinating and harmonizing their efforts in order to ensure the success of those efforts. The coordination will take place on both an institutional and strategic level as well as at a purely operational level. The inclusion of women and civil society ensures a fundamental change in behavior while allowing for consideration of the unique needs of first-generation people;

It is important to improve the capabilities of everyone involved in the solid waste management chain, which includes pre-collection, final disposal, collection, recycling, transportation, and valorization. Therefore, the report is not specific about how the civil society plans to value these deductions through a circular economy policy.

4.2.1.1 Respondents' experience on advocate Circular Economy on Plastic Waste Management

Understanding the research respondents' knowledge and competence in the circular economy for the management of sustainable plastic waste is essential. Their wide history includes a range of circular economy techniques, from project implementation and community participation to policy lobbying and innovation. In order to shed light on effective tactics, difficulties, and opportunities in the pursuit of sustainable plastic waste management within the framework of the circular economy, we seek to tap into profound knowledge and experiences through this interview.

Instead the key points and trends in the field of advocacy for circular economy in plastic waste management.

Table 10: Experience on support Circular Economy on Plastic Waste Management

Experience on promoting Circular Economy in SPWM	Frequency	Per cent
Above 10 years	1	1.0
5- 10 years	13	13.7
3-5 years	38	40.0
Below 3 years	43	45.3
Total	95	100.0

Source: Field data, 2023

The results in Table 10 show that 45.3% of the respondents have strong experience on promoting at local level through policymaking process for below of 3 years. Because of using as profession, 40% have experience on advocate circular economy policy on plastic waste management for a period comprises between 3-5 years; 13.7% have experience of between 5 and 10 years while 1% have less experience on advocacy for a period above 10 years.

4.2.1.2 Evaluation of the local community's knowledge and understanding of the circular economy idea and its possible advantages

To contextualize the study, it is crucial to understand the justification for the assessment of the local community's comprehension, commitment, and awareness of the circular economy idea and its potential advantages. The idea of eliminating waste, maximizing resource efficiency, and promoting ethical consumption and production methods is at the core of this transformative strategy. As we navigate the difficulties of sustainability, it becomes clear that local communities' involvement and dedication are crucial for the success of circular economy programs.

By responding to these questions, the researcher hopes to assess the existing level of community involvement and knowledge as well as pinpoint any areas that might require more education, outreach, and engagement activities. Let's looking below the table 11 which

illustrate the evaluation of the local community's understanding about circular economy concept and its benefits. The transformative strategy prioritizes waste elimination, resource efficiency, and ethical consumption. Community involvement is vital for the circular economy's success, prompting research to assess awareness and identify areas for improvement. Table 11 evaluates the local community's understanding and highlights the need for education and outreach.

Table 11: Evaluation of the local community's knowledge, commitment, and understanding of the circular economy idea and its possible advantages

Awareness and Commitment at Local Community to SPWM (n=95)	Respondents who are more aware	respondents Less aware	Respondents who are not aware
	%	%	%
Aware at Local Community to SPWM item	21	69	10
Existing of any local Organizations in promoting SPWM	1	87	12
Level of engagement and participation does the local civil society demonstrate in circular economy-related activities	35	66	9

Source: Field data, 2023

Data from Table 11 are expressing the views of 95 respondents sampled from the field. So, the findings depicted on Table 11 illustrate that 21% of respondents are more aware to Sustainable plastic waste management concept while 69% are less and 10% are none aware at local community level. It means there is a weak rate at local community who are aware to sustainable plastic management.

The local Organization in promoting Sustainable Plastic Waste Management existing are less 87% regarding the scope of study and 12% are sure it is not existing in their zone.

The five among the founded subject during the research are work as economic interest group in informal. They confess today it is their subsistence matter which grouping those to recycle plastic waste at make them in shoes. Girls and women are reusing plastic for make juice both at individual business and grouped businesswomen informal level.

Businesswomen group are reusing also in their cooperative job and it is very helpful and less costly for the new entrepreneur. It is like the perceiving actions from population about civil society activities on sustainable waste management is low.

In term of level of civil society engagement and participation in circular economy related activities is null regarding to what we must expected.

The study resulted that 93% perceived in their locality any engagement and 7 % justify for them by the fact the one who engage on it, it is in private sector and starting their business by recycle them (Dina Pack, Cooperative Balemaya)

For most comment it is only the affairs for state, collectivity and private sector. One lady Respondents as local community development board member said: *“it is them who creates waste to get money now they must invest to resolve the issue because we are poor and cannot transform it without knowledge and financial support”*.

Harouna Diallo student from French University became a model in recycle plastic waste and mobilize at beginning his friend (Joliba, 2022).

In resume the level of engagement in the civil society is not significant and it is doing only by enterprises and informal business.

4.2.1.3 Local policies as regulations for the implementation of circular economy practices

Cities all over the world are relying more and more on the ideas of the circular economy in their efforts to promote sustainability, environmental stewardship, and resource efficiency Minister of Ghana. The same is true in Bamako, a bustling urban area that is expanding.

The circular economy offers a framework that has promise for cutting waste, protecting resources, and promoting sustainable habits, but its effective implementation depends on the creation of favorable regional policies and rules.

Ultimately, our investigation aspired to provide valuable insights that can inform policymakers, businesses, and civil society organizations about the current state of local policies in Bamako and their impact on circular economy practices. Through a better understanding of this regulatory landscape, we aim to contribute to the development of targeted strategies and recommendations that will further accelerate the city's transition toward a more sustainable and circular future.

Table 12: Local policies as regulations for the implementation of circular economy practices

Local policies regulations	Significant %	No Significant %	Inexistent%
Local policies or Regulations in place	1	93	6
Collaborative efforts between civil society organizations, businesses, and local government to advance circular economy initiatives?	0	86	13
Educational and awareness-building programs existing at the local level to inform and engage residents in circular economy practices	0	0	100
Local success stories or case studies showcasing the positive impact of circular economy practices on the community	0	1	99

Source: Field data, 2023

The findings in Table 12 showed that the local policies or regulations in place are non-significant as suggested by 93% of respondents. The research finds that there is insignificant 86% even some local sponsoring, for young and girl activities by businessman in collecting not in understanding other use of plastic waste argued, lead of collecting group at

Badalabougou. She didn't allow us use her name on this study. Thus there is not really sustainable building program according CEO Dina Pack.

There is not an educational and awareness building program the researcher finds out and one chief executive sector declared *unknown it and never saw it yet*. Even it exists the research do not find it meaning the population sample are unknown it.

In addition, local success stories or case studies showcasing the positive impact of circular economy practices on the community is inexistent at 89%. Some respondents recommended to build awareness program with extern success stories as Rwanda, through Community work. Early October saw the "Urban Resources and Circular Development Roundtable" in Accra, Ghana, the policy is also recommended to encourage the sharing experiences on the success stories model in circular economy.

4.2.2 The contribution of civil society local group in Circular Economy

Civil society local groups play a crucial and multifaceted role in advancing the Circular Economy, which is an economic model designed to minimize waste, promote resource efficiency, and foster sustainability. These groups operate at the grassroots level and contribute to various aspects of the Circular Economy, including waste reduction, resource conservation, and sustainable consumption. Understanding their contribution helps the study to right orient policy design.

Table 13: Local policies as regulations for the implementation of circular economy practices

Contribution of civil society local group (n=95)	High contribution	Low contribution	None contribution
	%	%	%
Young contribution	38	52	10
Women contribution	34	56	9
Faith Organization contribution	3	12	85

Source: Field data, 2023

Table 13 indicates that 38% of young are the most contributing to circular economy than other group, while 52% find that the contribution is low and 10% suggested that nothing is done. It is also shown that 56% of women group's contribution is low to circular economy than that of young while 34 % amongst them argued that their contribution the highest whereas 9% of them found none contribution.

In addition, Faith Organization group are pessimistic since 85 % of them stated that there is no contribution to circular economy except 3% who found it high and 12% who judged it low. These findings orient the research to 4Rs on which circular economy is based: Recycle, Reduce, Refuse, Reuse.

The practice principles of recycle, reduce, reuse and refuse have significant positive impacts to design empowering policy in plastic waste management. Empowering individuals by flexibility on both individual policies and at global community level support right any strategy considering and involving the population.

(i) Recycle: Recycling involves the process of converting waste materials into reusable materials. By empowering individuals to recycle, they have the choice to divert waste from landfills and contribute to the conservation of natural resources. Recycling helps reduce the need for raw materials, conserves energy, and reduces pollution associated with the extraction and production of new materials. The research finds also that recycle is more preferred (on figure) among the list and populated concept according CEO's Dina Pack. In addition, survey done by Enni Ruhanno argued that 93% of respondents said they would purchase products made of recycled plastic again, demonstrating how pleased they were with the products (Ruhanno, 2022).

(ii) Reduce: Reducing refers to minimizing the consumption of resources and generating less waste. Empowering individuals to reduce allows them to make conscious choices about their consumption habits. By reducing the amount of waste produced, individuals can minimize

their environmental footprint and conserve resources. Five leaders of local are unamused that reduce policy is thug while through selling plastic water, uneducated and pupils have been employed in informal (interview at Medina Coura). This cannot match with reducing concept easily and being achieved through practices such as buying only what is necessary, using reusable products, and opting for products with minimal packaging.

(iii) Refuse: Refusing involves saying no to unnecessary or harmful products and practices. Empowering individuals to refuse allows to make informed decisions about the products they consume and the impact they have on the environment. By refusing single-use plastics, excessive packaging, or products with harmful chemicals, individuals can contribute to reducing waste and promoting sustainable alternatives.

The research find only among the 4 concepts refuse is the bottom choice by the population of the study. 10% only accepted. *“Almost do not measured that it is easier to do refusing concept on plastic waste which can encourage state and business to shift on eradicating in short time plastic”*.(President Young Leader in Kalaban, 2023)

(iv) Reuse: Reusing involves finding new purposes or extending the lifespan of products. By reusing items instead of throwing them away, we can conserve resources, reduce waste, and save money. This can be done through practices such as repurposing, repairing, or donating items instead of discarding them (Maiga, 2021). In addition, reuse is most preferred behind recycle and its concept can boost the economy of a nation and provide an alternative source of income (Pandey, 2023). Then the following graph demonstrates what people desired after introducing them the different concept of Circular Economy in Plastic Waste Management. It distinguishes by which way easier people can adhering the sustainable plastic waste through Circular Economy.

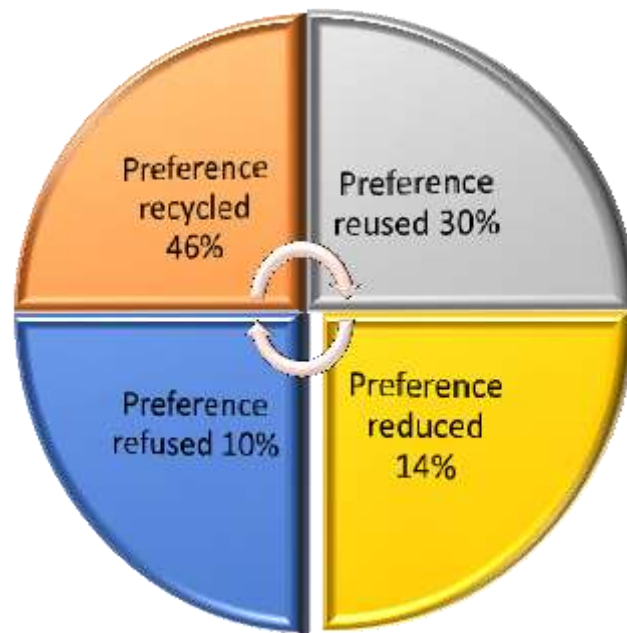


Figure 2: choice among recycle, reused, refused, reduced plastic waste researcher 2023

The result allows demonstrating how individuals will take an active role in protecting the environment and making a positive impact on future generations. The result in the graph shows 46 % prefer use recycle concept, 30% prefer the reusing concept, 14% prefer using reducing policy while only 10% prefer refuse concept.

The majority of the preference on using Circular Economy concept by the civil society is recycling. We found out also in the UNEP last report the same recommendation to well managing Plastic waste. It is as recycling is most unanimous recommended as a crucial step in waste management because it offers several significant benefits as some respondents highlighted due to following arguments:

(ii) Resource Conservation

Recycling helps conserve valuable natural resources. By recycling materials like paper, plastic, glass, and metal, we can reduce the need for extracting and processing raw materials from the environment. This conserves energy and reduces the strain on natural resources like forests, water, and minerals.” In addition, this response is also support by on his documentary

about Circular economy said “recycle through dematerialization refers to use less of resource to serve the same economic function”.

(ii) Waste Reduction

Recycling plays a vital role in reducing the amount of waste sent to landfills. By diverting materials from the waste stream and giving them a new life, recycling helps minimize the environmental impact of waste disposal. This helps to alleviate the burden on landfills and promotes a more sustainable waste management system.

(iii) Energy Savings

Recycling often requires less energy compared to producing new products from raw materials. The process of recycling materials like aluminum, for example, consumes significantly less energy than extracting and refining aluminum ore. By using recycled materials, we can conserve energy and reduce greenhouse gas emissions associated with manufacturing processes particularly with the conflict army in North since 2012

(iv) Environmental Protection Recycling helps protect the environment by reducing pollution and minimizing the extraction of natural resources according the group Siguida Djeya. By diverting waste from landfills, recycling helps prevent the release of harmful substances into the soil, water, and air. It also helps mitigate the environmental impacts of resource extraction, such as deforestation and habitat destruction said a forester in charge of environment at commune Five sector.

While recycling is highly recommended, the common finding on focus discuss suggest that it is important to note that it works best when combined with other principles like reducing consumption, reusing items, and refusing unnecessary waste. Together, these practices form a comprehensive approach to waste management and sustainability as recommendation belong to the chief of Sector Kalaban ACI who stated: *“empowering individuals and promoting*

choice among these principles, we determine a more sustainable and environmentally conscious lifestyle”.

4.2.3 Challenges faced young, women, and faith organizations in sustainable plastic management through Circular economy

There is any action without challenge even it is few. The research discovers while that young, women, and faith organizations play a crucial role. This point helps the research to understand how it will attain the objectives when its overpassed these challenges draw down driving circular economy practices for plastic waste management.

Here are common challenges they encounter as they have been pointed out by respondents and detailed below:

4.2.3.1 Limited Resources

Young, women organizations often operate with limited financial and logistical resources, which can hinder their ability to implement large-scale initiatives or projects for plastic waste management according the President of FID Mali.

4.2.3.2 Lack of Awareness and Education

There may be a lack of awareness and understanding among community members about the importance of circular economy practices and the impact of plastic waste. This can make it challenging these organizations to mobilize support and drive behavior change saying collected from the director of 2nd cycle school at Garantiguibougou.

4.2.3.3 Gender Inequality

Women organizations may face gender-related challenges, such as limited access to resources, decision-making power, and opportunities for leadership roles. Overcoming these barriers is crucial for their effective participation in circular economy initiatives FID Mali through interview.

4.2.3.4 Cultural and Religious Barriers

Faith organizations encounter cultural or religious beliefs that do not prioritize environmental concerns or may have conflicting views on waste management practices. As by example people refuse to put their bread in paper package because they find it takes dust Imam Ismael Diarra (Interview, 2023). In addition, Mrs Arkiatou Maiga member of OSADL argued that her people refuse eat inside any plastic plate even drink water in. Navigating these barriers and finding common ground can be a challenge. 48% find it is more and this challenge is thug to achieve sustainable using of plastic in term of reuse while it is preferred in term of refusing and reducing.

4.2.3.5 Policy and Regulatory Frameworks

There are 89% lack of supportive policies and regulations for circular economy practices and plastic waste management. Advocating for policy changes and engaging with policymakers can be a complex and time-consuming process due of community literacy level according the OSADL's Manager Program.

The Think Tank ALAM executive Director said his recent research point out that 73% of girl group reuse the plastic bottles for sale juice with the plastic waste collected and must convince clients that those bottles are well clean.

Table 14: Challenges faced Civil Society in Sustainable Plastic Waste Management

Challenges (n=95)	Frequent	Percent
Limited Resources	84	88.4
Lack of Awareness and Education at National	90	94.7
Gender Inequality	88	92.6
Cultural and Religious Barriers	86	90.5
Inefficient of Policy and Regulatory Frameworks	94	98.9

Source: Field data, 2023

Table 14 shows that the majority of respondents strongly agreed that inefficiency of policy and regulatory framework (98.9%). Almost 94.7% agreed that there is a lack of awareness and Education at National level, Gender inequality exist (88%); it emphasizes the fact that girls are more involved than boys in collecting waste than recycle them.

In addition, 84% agreed to have limited Resources to well implement.

Despite these challenges, young, women, and faith organizations can overcome them through collaboration, capacity building, and advocacy efforts. By working together and leveraging their unique strengths, they can drive positive change and contribute to sustainable plastic waste management in their communities.

4.2.4 Strategies for both Faith and Youth, Women organizations in promoting Circular Economy for sustainable PWM

The strategies envisaged are aimed at the two categories of civil society, namely: faith-based organizations as well as young people and women involved in the plastic waste management. Tables 16 to 17 depicted the details.

4.2.4.1 Strategies in Faith Organizations

Faith organization play better role in Sustainable environment. Here the study considers these following point below to find out strategies which can support the contribution of civil society in circular economy for sustainable plastic management. It draws the different faces faith selected organization can use in supporting Circular Economy Policies on plastic waste management.

Table 15: Strategies for Faith Organization in Promoting Circular Economy for Sustainable Plastic Waste Management.

Strategies for faith Organization	Frequency	Percent
Awareness Campaigns during weekly meeting	78	82.1
Educational Workshops and Seminars to their members	32	33.7
Collaboration with Schools and Universities	45	47.4
Engaging Stakeholders	47	49.4

Source Field Data, 2023

Table 15 shows 82.1% are strongly agree the policy to aware during weekly meeting on circular economy concept. 33.7% less than the cut off agree that faith organization can implement educational workshops and seminar to their members while 47.4% consider policy relating the collaboration with schools and universities and 49.4% are below the cut off showing the policy in engaging stakeholder.

(i) Awareness Campaigns

The Faith organization conduct awareness campaigns to educate the public about the importance of Circular Economy in plastic waste management. These campaigns can include weekly praying, community events, and collaborations with other organizations to reach a wider audience.

(ii) Educational Workshops and Seminars

The research finds it strongly agreed that through Educational workshop and seminars strategy the Faith organization promote circular economy.

It may organize workshops and seminars to educate individuals, businesses, and communities about the principles and practices of Circular Economy in plastic waste management. These sessions can cover topics such as recycling, waste reduction, and sustainable consumption.

(iii) Collaboration with Schools and Universities

The research result agrees that the faith organization may collaborate with educational institutions to integrate Circular Economy concepts into their curriculum. This can help raise awareness among students and future leaders about the importance of sustainable plastic waste management.

(iv) Informational Materials

The Faith organization may develop and distribute informational materials such as brochures, pamphlets, and online resources to provide guidance on Circular Economy practices. The result agree that it is significant because these materials can offer practical tips on recycling, reducing plastic waste, and making sustainable choices.

(v) Engaging Stakeholders

The result strongly agree that the Faith organization may engage with various stakeholders, including businesses, policymakers, and community leaders, to promote Circular Economy in plastic waste management. This can involve advocating for supportive policies, encouraging sustainable business practices, and fostering collaborations for collective impact.

For instance, faith organizations promote Circular Economy through awareness and education in these general ways.

4.2.4.2 Strategies in Young and Women organizations

The strategies for empowering women and young individuals to drive the Circular Economy in sustainable plastic waste management in Bamako are crucial for implementing effective civil society action as on general objectives of the study.

Local organizations led by young women and girls can make a substantial contribution to the development of circular economy techniques for managing plastic trash. These are ways they can help, according to the researcher and down the table on strategy for sustainable plastic waste management.

Table 16: Strategies on Women, Young group in driving Circular Economy in Sustainable Plastic Management

Strategies for young, women local organization n=95	Frequency	Percent
Awareness Campaigns	65	68.4
Community Clean-up Drives	80	84.2
Skill Development Programs	88	92.6
Collaboration with Local Businesses	95	100
Advocacy and Policy Engagement	63	66.3

Source: Field Data, 2023

Among the strategies proposed in this research to match with the challenges, Table 16 presented the response collected from 95 respondents. Thus, 68.4% supported awareness Campaigns, 84.2% Community Clean up drives policy, 93% skill Development Programs and 66.3% encourages advocacy and Policy Engagement. The unanimous responses at 100% support collaboration with Local Business.

It means the global collaboration between industries in manufacturing and civil society must design circular economy policy together.

(i) Awareness Campaign

This aims at organizing educational campaigns and workshops to raise awareness about the importance of circular economy practices and the impact of plastic waste on the environment.

It provides also the use of creative and engaging methods to reach out to the community, such as social media, community events, and school programs.

(ii) Community Clean-up Drives

The focus is to mobilize the volunteers to conduct regular clean-up drives in local neighborhoods, parks, and water bodies. Then, emphasizing the need to segregate and properly dispose of plastic waste, encouraging recycling and upcycling wherever possible.

(iii) Skill Development Programs

The purpose here is to offer training programs and workshops on waste management techniques, recycling, and upcycling that can empower individuals, especially women, with the skills and knowledge to become entrepreneurs in the circular economy, such as creating products from recycled plastic.

(iv) Collaboration with Local Businesses This aims to forge partnerships with local businesses, such as retailers and restaurants, to promote sustainable practice and encouraging them to reduce single-use plastics, implement recycling programs, and explore alternatives like biodegradable packaging.

(v) Advocacy and Policy Engagement

The aim is to engage local policymakers and government authorities to advocate for supportive policies and regulations that promote circular economy practices; encouraging the public consultations, submit policy recommendations, and collaborate with other organizations to amplify the voice.

(vi) Youth and Women Leadership Programs

It would be better to create platforms and opportunities for young and women leaders to take charge and drive initiatives related to circular economy practices and fostering leadership skills, provide mentorship, and encourage their active participation in decision-making processes.

All in all, the research can argue that absolutely Civil Society, including youth, women, and faith organizations, can play a crucial role and driving circular economy practices for sustainable plastic waste management in Bamako city. These organizations have the potential to create awareness, mobilize communities, and advocate for effective policies linked to businesses and innovate initiatives.

Youth organizations can engage young people in educational campaigns, workshops, and clean-up drives to raise awareness about the importance of reducing, reusing, and recycling plastic waste. They can also promote innovative solutions such as upcycling and eco-friendly alternatives.

Women's organizations can contribute by organizing training programs on waste management and recycling techniques, empowering women to become entrepreneurs in the circular economy. They can also advocate for gender-inclusive policies and initiatives that address the specific challenges faced by women in waste management.

Teenage girls are remarkably adept at starting grassroots initiatives like projects and campaigns. They can take the helm of neighborhood cleanup projects, recycling campaigns, and efforts to cut down on plastic trash. They can promote change from the bottom up by organizing communities and highlighting the immediate advantages of sustainable behaviors.

Faith organizations can leverage their influence and networks to promote sustainable practices and values within their communities. They can organize awareness campaigns, incorporate environmental teachings into religious teachings, and encourage responsible consumption and waste management practices.

By collaborating and working together, these civil society organizations can drive change at the grassroots level, influencing individuals, communities, and policymakers to adopt circular economy practices for sustainable plastic waste management in Bamako city.

The finding show that the hypothesis about the Civil Society through Youth, Women and faith organizations can advocate well Circular Economy on sustainable Plastic waste management at local and National level, Private sector and State policy strongly agreed.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of findings from the study conducted on the plastic wastes management in Bamako, Capital City of Mali. The main objective of the study was to implementing civil society (both women and youth local group) and faith organization for promoting circular economy through wastes management.

5.1 Summary of Findings

Findings were analyzing according to specific objectives set in the study. Below is the summary of key findings.

5.1.1 Current state of plastic waste management in Bamako

Regarding state of civil society role, the majority of participants (94%) argue that people from civil are involved in plastic waste management but the issue is the lack of community cleaners.

5.1.2 Contribution of civil society (women and youth organizations) to circular economy policy in the plastic waste

Additionally, only 3% of faith-based organizations find that they are non-significantly contributing to the circular economy.

According to the table's results, the youthful group (40% of them) and the women's group (59% are the one support and participate in circular economy in Bamako, not as the religion group at (84%), do not participate in the circular economy.

These results help the research focus on the groups that need to be well-empowered to achieve sustainable plastic management. Young and women's groups in Bamako drive the Circular Economy in plastic waste management through innovation, community engagement,

advocacy, education, inclusivity, commitment, economic opportunities, and role modeling, making them essential change agents in this critical endeavor.

5.1.3 Challenges faced by civil society in plastic waste management in Bamako City

The highest challenges this research finding out is the strong significance on Inefficient of policy and regulations framework. This is a great challenge, followed on lack of Awareness and Education at local level agree have limited Resources to well implement. There is gender inequality also which frequently challenge state policy because of religion.

Despite these challenges, young, women, and faith organizations can overcome them through collaboration, capacity building, and advocacy efforts. By working together and leveraging their unique strengths, they can drive positive change and contribute to sustainable plastic waste management in their communities.

5.1.4 Strategies that civil society set for addressing the challenges encountered in plastic waste management for sustainable environment in Bamako

The responses are 100 percent in favor of working with local businesses. This is the best strategy to implement. Therefore, 93% are in favor of skill development programs, 84.2% are in favor of community clean-up as a policy driver, 68.4% are in favor of awareness campaigns, and 66.3% are in favor of advocacy and policy engagement. These tactics have the potential to make a substantial difference in resolving the problems associated with managing plastic trash and promoting a sustainable environment in Bamako provided they are carried out successfully and in cooperation with regional communities, companies, and governmental organizations.

5.2 Conclusion

The general objective of this study is implementing the contribution of civil society in promoting sustainable plastic waste in Bamako. Young, women, and faith organizations connect public sector and private sector through the wide field they have in Mali. As the capital city of Mali, Bamako faces pressing environmental challenges, including plastic pollution. Leveraging the strengths and values of these two groups can significantly contribute to addressing this critical issue despite is less currently.

By collaborating and working together, these civil society organizations can drive change at the grassroots level, influencing individuals, communities, and policymakers to adopt circular economy practices for sustainable plastic waste management in Bamako city.

The finding show that Civil Society through Youth, Women and faith organizations can advocate well Circular Economy on Sustainable Plastic Waste Management at local and National level Private sector and State policy is strongly agree.

The role of young women and faith organizations in advancing the circular economy for sustainable plastic management is pivotal, especially in the context of Bamako's environmental challenges. Young women are instrumental in community education and awareness efforts. They can lead initiatives to educate their peers and local communities about the adverse impacts of plastic pollution and the principles of a circular economy. Their relatability and ability to engage diverse audiences make them effective educators and advocates. Faith organizations, deeply rooted in the community, can utilize their platforms to disseminate messages of environmental stewardship in alignment with their teachings.

Overall, the active involvement of youth, women, and faith organizations in advocating for circular economy practices in sustainable plastic waste management can create a powerful force for change. Their efforts can influence private sector practices, shape state policies, and contribute to a more sustainable future.

5.3 Recommendations

The researcher's recommendations are to encourage and empower civil society for greater involvement in the circular economy for sustainable plastic management in Bamako as detailed thereafter:

➤ **Capacity Building and Training**

Provide training programs and workshops to enhance the knowledge and skills of civil society members regarding circular economy principles, sustainable plastic management, waste reduction, and recycling. This training can empower them to become effective advocates and implementers of circular practices.

➤ **Access to Information**

Ensure that civil society groups have access to up-to-date information, research, and best practices related to sustainable plastic management and circular economy initiatives. Create a platform or resource center for sharing relevant data and knowledge. **Financial Support**

Offer financial support or grants to civil society organizations that are actively engaged in circular economy projects. These funds can help them scale up their efforts, invest in infrastructure, and reach a broader audience.

➤ **Collaboration and Networking**

Foster collaboration between civil society groups, government agencies, private sector entities, and international organizations. Networking opportunities can facilitate resource sharing, idea exchange, and joint initiatives focused on sustainable plastic management at local which is more easy to take depart in Bamako City

➤ **Policy Advocacy**

Train civil society members in policy advocacy techniques and provide guidance on engaging with local and national policymakers. Encourage them to advocate for policies that support circular economy practices, including plastic waste reduction and recycling.

➤ **Public Awareness Campaigns**

Support civil society in organizing public awareness campaigns and educational programs aimed at informing the general population about the benefits of circular economy practices and responsible plastic management. Utilize various media channels and community events for outreach.

➤ **Innovation and Entrepreneurship:**

Encourage civil society organizations to explore innovative solutions and entrepreneurial ventures in sustainable plastic management. Promote initiatives that focus on recycling, upcycling, and the development of circular products.

➤ **Community Engagement**

Empower civil society to engage directly with local communities. Encourage the establishment of community-based circular economy projects and initiatives that address the specific plastic waste challenges within neighborhoods.

➤ **Monitoring and Evaluation**

Develop mechanisms for monitoring and evaluating the impact of civil society-led circular economy initiatives. Provide guidance on data collection, performance assessment, and reporting to measure progress effectively.

➤ **Recognition and Award**

Recognize and celebrate the achievements of civil society groups and individuals who have made significant contributions to sustainable plastic management and circular economy efforts. Awards and recognition can motivate and inspire continued engagement. Specially organize competition between young, and women local group and at district level through the particular group “Citizen Brigade”

➤ **Capacity for Data Collection**

Help civil society organizations build the capacity to collect data related to plastic waste generation, recycling rates, and environmental impact. Access to accurate data is essential for informed decision-making and project evaluation.

➤ **Engage Youth and Students**

Encourage the involvement of youth and students in civil society-led initiatives. Young people often bring fresh perspectives, enthusiasm, and innovative ideas to the circular economy and plastic management efforts.

➤ **Long-Term Sustainability**

Emphasize the importance of long-term commitment to circular economy practices. Support civil society groups in developing sustainable, enduring projects rather than short-term solutions.

By implementing these recommendations, Bamako's civil society can play a more significant role in driving the circular economy for sustainable plastic management. Their engagement, advocacy, and community-based initiatives can contribute to a cleaner environment, reduced plastic pollution, and improved quality of life for residents in the city.

5.4 Areas for further research

At the end of this piece of work, the researcher suggested that future researchers should investigate the specific barriers and challenges that hinder the active involvement of businesswomen, young individuals, and local leader's organization in circular economy initiatives at local community level to the plastic waste management. These barriers could include cultural norms and political, limited financial resources, or other factors.

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APPENDICES

Appendix I: Consent Form

I am Cheick Abdoul Kader Diarra, student from Kigali Independent University. I am conducting a study on Wastes Management related to Master's Thesis in Bamako in order to complete my studies in Development studies.

Information and Purpose: The interview for which you are being asked to participate in, is a part of a research study to examine the contribution of the civil society (young and women organization) on plastic waste management through circular economy as earlier indicated

Your Participation: Your participation in this study will consist of an interview lasting approximately 30-45 minutes. You will be asked a series of questions about the subject matter. You are not required to answer the questions. You may pass on any question that makes you feel uncomfortable. At any time you may notify the researcher that you would like to stop the interview and your participation in the study. There is no penalty for discontinuing participation.

Benefits and Risks: The benefit of your participation is to contribute information to the contribution of the women and young Associations advocacy environment management through Circular economy. There are no risks associated with participating in the study.

Confidentiality: All of your information and interview responses will be kept confidential. The researcher will not share your individual responses with anyone other than the research supervisor. Your name and identifying information will not be associated with any part of the written report of the research.

By signing below, I acknowledge that I have read and understand the above information. I am aware that I can discontinue my participation in the study at any time.

Signature _____ Date _____

May I proceed with the interview? (please tick)

Yes
Proceed

No

End Interview

Enter Interview Start Time |__ __: __ __|

Date of Interview (MM/DD/YYYY)	<input type="text"/>	Questionnaire Number	<input type="text"/>
Commune 1: Medina Coura		Medina Coura:	_____
Commune 4: Lafiabougou		Lafiabougou:	_____
Commune 5: Badalabougou		Badalabougou:	_____

Appendix 2: Survey Questionnaire

I. Respondents' Demographic Profile

No.	Question	Response	Instructions
1	How old are you?	<input type="text"/> <input type="text"/>	Write or tell
2	Sex of respondent.	Male Female	Observe
3	What is your marital status?	Married <input type="checkbox"/> Living with a partner <input type="checkbox"/> Not in a union (single) <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced/Separated <input type="checkbox"/> Refuses to answer <input type="checkbox"/> Other (Specify) _____	Single response question by X
4	What is the highest level of school you competed?	1. None <input type="checkbox"/> 2. Some primary <input type="checkbox"/> 3. Completed primary <input type="checkbox"/> 4. Some secondary <input type="checkbox"/> 5. Completed secondary <input type="checkbox"/> 6. Some university <input type="checkbox"/> 7. Completed university <input type="checkbox"/> 8. Other (please specify)	Single response question by X
5	For how long have you been staying in this community?	10 years or more <input type="checkbox"/> 5-10 years <input type="checkbox"/> 2-5 years <input type="checkbox"/> Less than 2 years <input type="checkbox"/> Refuses to answer <input type="checkbox"/>	Single response question by X
6	Total number of people living in this organization?	Total number = _____ 1.9A. Number of MALE living in this organization = _____ 1.9B. Number of FEMALE living in this organization = _____	

Section II: To analyze the current states of civil society role on plastic waste management in

8	When did you join the current Organization	Month	Write number
9	Were you a member of another Organization before entering this group?	No <input type="checkbox"/> Yes <input type="checkbox"/>	Write in Single X
10	How many members were you when you started?	Members at start:	Write number
11	Compared to before using the PWM would you have knowledge on Environment Management through Circular Economy less, more or about the same?	Less (1) <input type="checkbox"/> More (2) <input type="checkbox"/> About the same(3) <input type="checkbox"/>	Single response question by X

Bamako

Section 2: Which circular economy policy drive in sustainable development in Bamako City considering the contribution of civil society (women and youth organizations) on in the plastic waste management (Reduce, Reuse, Recover, and Recycle)

1. How is the contribution of young group in Circular Economy

- less
- more
- none

2. How is the contribution of Women group in Circular Economy

- less
- more
- none

3. How is the contribution of your local government in sustainable Plastic wastes Management through circular economy

- less
- more
- none

4. How is the contribution of your local faith organization in sustainable Plastic Waste Management through circular economy

less	<input type="checkbox"/>
more	<input type="checkbox"/>
none	<input type="checkbox"/>

Section 3: Assessing the currents states of civil society role on PWM in Bamako

Current state of civil society role on PWM in Bamako (Items)	A	D
Lack on Advocacy state and Business project and campaign		
Lack of Skill Development Programs		
Lack Youth, Women Engagement in Circular Economy Projects		
Lack of Participation in Circular Economy Startups		
Lack of legal framework and regulations		
Lack of community cleaned up project		
Lack of global cooperation in Circular Economy practices		

Section 4: Challenges faced Young, women, and Faith organizations in Circular economy for sustainable environment case of plastic waste management

The following statements relate to the current way for civil society to contribute or influencing policy Private Sector on plastic waste Management towards Circular Economy in Bamako. Indicate how agreeable you are with the statements by placing a tick (√) against correct option. Agree – (A), Neutral – (N), Disagree – (D),.

Challenges	A	N	D
Limited Resources			
Lack of Awareness and Education			
Gender Inequality			
Cultural and Religious Barriers			
Policy and Regulatory Frameworks			

(Select all that apply)

Section 5: Strategies or measures can be taken for addressing the challenges encountered. Finding out strategies with private sector and civil society that can set for addressing the challenges encountered in plastic waste management for sustainable environment at Bamako.

(Select all if that apply)

Strategies for young, women local organization	A	N	D
Strategies for young, women local organization n=95			
Awareness Campaigns			
Community Clean-up Drives			
Skill Development Programs			
Collaboration with Local Businesses			

Appendix 3: Interview Form Guide

1. How aware is your local community about the concept of circular economy and its potential benefits?

Less

More

Nothing

1. Are there any local organizations or initiatives actively promoting circular economy practices within the community?

Many

Few

None

2. What level of engagement and participation does the local civil society demonstrate in circular economy-related activities?

Significant

Less significant

Non-significant

4. Are there any local policies or regulations in place that support or hinder the implementation of circular economy practices?

Significant
 Not Significant
 Inexistent

5. Are there any collaborative efforts between civil society organizations, businesses, and local government to advance circular economy initiatives?

Significant
 Not Significant
 Inexistent

6. What educational and awareness-building programs exist at the local level to inform and engage residents in circular economy practices?

7. Are there any local success stories or case studies showcasing the positive impact of circular economy practices on the community?

Significant
 Not Significant
 Inexistent

Section 4: How civil society through community Faith Organization influences circular economy on plastic waste management?

Choose one among the list

Refuse
 Recycle
 Reuse
 Reduce

How civil society influence circular economy on waste management in Bamako city through community faith organization?

(Select all that apply)

Aware community member
 Empowering Community Skills
 Extend Access to information
 Lobbying law
 Other (please specify) __