

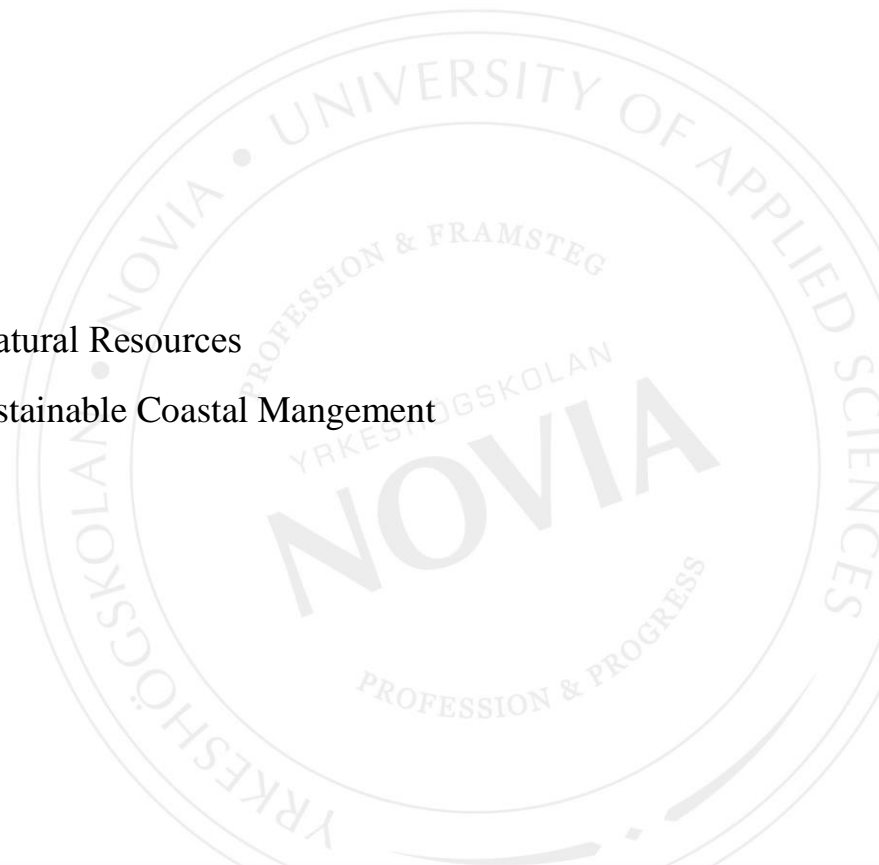
**The effects of littering on tourism in Limbe, the Southwest Region  
of Cameroon**

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**BACHELOR'S THESIS**

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**Abstract**

The Limbe municipality is one of the main touristic destinations in Cameroon but, is challenged by a serious litter. The purpose of this research is to know how littering affects tourism or the tourism industry in Limbe, Southwest Region of Cameroon, as well as to gain a better understanding of the community's perception of littering and its environmental impacts. The methodology was based on a desk research (Literature review), meetings with government and private officials and a survey gauged on the development of the litter situation, the areas that are most affected by littering, community's perception of the aspects of littering, tourist's perception of littering, and the pattern of tourism in Limbe. The result of this study indicates that littering has significant effects on tourism in Limbe and the community's perception of littering and it's environmental impacts was poor. However, creating awareness of the eminent danger that litter pose to the environment is a step to begin with, increased incentives for clean-up campaigns, link tourism with other economic sectors, preservation of wildlife, and established good communication network is the way forward.

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Language: English    Key words: littering effects, Cameroon tourism, littering environment, tourism effects, environmental impacts, littering, health, beach litter

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## List of Abbreviations

CCA	Chromated copper arsenate
EEA	European Environment Agency
GCI	Global Conscience Initiative
GDP	Gross Domestic Product
HYSACAM	Hygiene and Health of Cameroon
ISO	International Organization for Standardization
JCI	Junior chambers International
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SPSS	Statistical Package for Social Sciences
UNWTO	United Nation World Tourism Organisation
WTO	World Tourism Organisation

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## 1 Introduction

Tourism has been an important economic activity in the historical era. Tourists travel from one place to another to gather biodiversity knowledge of historic areas, for leisure, as well as to view the beauty of landscape, culture, and heritage of an environment. Tourism, apart from the pleasures it bestows on the individual, also holds great benefits for local economies.

Tourism remains one of the largest growing industries worldwide (EEA, 2006) and its GDP ranges between 2% for small-scale tourism countries to 6.2% in countries like Cameroon (WTO, 2015). Tourism is a vital sector of Cameroon's economy, as it contributes tremendously to its growth. It seems to be a successful industry in the country but despite the accomplishments of this sector, there are many challenges encountered. Key among these is the littering problem that is predominant in both rural and urban settings of the country. Littering impacts all segments of the society, but its hardest blows are taken by the environment. The hitches posed by littering are widely documented. The most prominent are economic impacts (i.e. funds for beach maintenance, health expenses) (Sheavily and Register, 2007), impacts on marine organisms such as ingestion (Possatto et al., 2011), (Juliana A. Ivar do Sul et al., 2011), and entanglement (Gregory, 2017), smothering (Gregory, 2009) and the release of contaminants from/to synthetic materials (Ogata *et al.*, 2009), (Jiménez et al., 2015).

Littering has become a common phenomenon such that, almost everyone on planet Earth litters in one way or the other. To some people, the habit of littering is normal practice and they see no reason for a change of habit (DAWN.COM, 2017). Thus, it is now a habit to most people in Cameroon, who can't escape the aspect of littering. There is no specific regulation regulating littering in Cameroon or there is but, poor governance make execution difficult but, there are some environmental regulations or laws in Cameroon regulating waste management and municipal councils provides waste management services in Cameroon (Manga, Forton and Read, 2008).

It is believed, that 62% of the people in England litter and only 28% out of the 62% admit to littering (Kingdom, 2016). No wonder "Keep Britain Tidy" outlines in a report (2016) that "Litter is one of the first signs of social decay. If we don't care about litter on our street, in our parks or our high streets, we are unlikely to care about other environmental issues that negatively impact on our lives, our communities and societies" This is an issue

commonly found in all countries. Among the many factors negatively impacting tourism, this research focuses solely on littering and its effects it has on tourism or tourists in Limbe, Southwest Region of Cameroon.



Figure 1: Location of Limbe in Cameroon (Colin Stewart, 76 crimes)

## 2 Purpose and Research Question

The aim of this research is to know how littering affects tourism or the tourism industry in Limbe, Southwest Region of Cameroon, as well as to gain a better understanding of the community's perception of littering and its environmental impacts.

### 2.1 Main Question

What are the effects of littering on tourism in Limbe, Southwest Region of Cameroon?

### 2.2 Sub-questions

1. How has the litter situation developed in the country?
2. What areas are the most affected?
3. Where does the litter come from and of what type is it?
4. What is the community's perception of the aspects of Littering?
5. What is the tourist's perception of the aspects of Littering?
6. What does the tourism pattern look like? Has it changed over the years, and if so, what has affected it?

### **3 Theoretical Framework**

As mentioned before, tourism is an important economic activity. Tourists travel from one place to another for leisure, as well as to view the beauty of the landscape, culture, and heritage of an environment. Tourism creates jobs (employment), increases spending in the local community, causes diversification through the development of a new source of income in an economy, as well as infrastructural development and other opportunities (Bennett, 2014). Still, the tourist industry in most countries is facing a lot of difficulties. There is poor transport, sanitation (littering or poor waste management), housing issues and poor communication, which thus prohibits the growth of key activities and services needed to attract tourists. Poor community development, short tourist season, and lack of potential investors to invest in touristic areas is another problem in this industry in Cameroon. At times, the stereotypical way of thinking by most of the community as well as the way they do not want to accept modern development or change, make tourists not want to visit or revisit. (Human society; chapter 7, 1989)

Global reports on international tourist arrivals show that tourism increased by 4.3% in 2014, reaching a total of 1133 million. For 2015, UNWTO forecasted that international tourist visits were going to grow by 3 to 4% (UNWTO, 2015).

Just like in other economies, tourism is an important sector for development in the economy of Cameroon. In 2014, the total contribution of tourism to Cameroon's GDP was XAF 946.1 billion (6.2% of GDP) and was predicted to rise by 3.7% in 2015, and to rise by 5.7% to XAF 1,713.5 billion (6.5% of GDP) in 2025. The annual number of tourists who visited Cameroon in 2013 stood at 912,000 (World Tourism Organisation, 2015), which means it has risen above the 500,000 visitors per year which according to the World Tourism Organisation (WTO), qualifies an environment or country as a tourist destination.

The direct contribution of tourism to the economy of Cameroon reflects the internal spending on tourism (i.e. the total spending within a particular country on tourism by residents and non-residents for business and leisure purposes) as well as government individual spending (that is, spending by government on Tourism services directly linked to visitors, such as cultural [e.g. museums] or recreational services [e.g. national parks]).

Many research studies strongly indicate littering habits to be one of the major sources of marine pollution because almost everyone has developed, or is developing, the habit of littering, especially on beaches and in parks which has a tremendous impact on the environment, human health, and the tourism industry. Litter enters the seas from land-



based sources, from ships and other installations at sea, from the point and diffused sources, and can travel long distances before being stranded. No wonder the amount of waste produced by humans worldwide every day is rising fast to exceed 11 million tons and keeps increasing over years. Even though waste production between countries varies, a huge amount of these debris does not decompose or decompose slowly (World Bank, 2013).

The most common litter materials are plastics, glass, metal, paper, cloth, rubber, and wood. But, plastics constitute the most important part of litter, especially on beaches. Up to 100% of the floating litter and 80% of the stranded litter on beaches constitute of common items such as plastic bags, fishing equipment, food and beverage containers (Galgani, Hanke and Maes, 2015).

Plastic, which is the main component of marine litter, is found everywhere. It forms about 95% of accumulated waste on the shoreline, the seafloor, and the sea surface. Floating litter can be transported over long distances by prevailing winds and currents (Barnes *et al.*, 2009). However, since litter is a major problem everywhere, local and international communities struggle every year searching for the best possible solution to handle the littering problem for good, and whatever the result is, we all are responsible for the problems resulting from littering. However, litter studies in Cameroon show that littering has environmental, social, health and economic impacts.

### **3.1 What is littering?**

Littering is the improper disposal of rubbish or waste objects on the ground, sea, rivers, oceans, streams and lakes. Littering is an act of discarding or scattering trash about in disorder over a socially inappropriate area. It is an ugly, expensive, widespread, and dangerous phenomenon. Littering comes about because of lack of trash receptacles, improper environmental education, laziness and insufficient consequences for the ones who litter (Robinson, 1976), (Conserve Energy Future, 2017).

### **3.2 Littering in Cameroon**

Waste disposal is a major worry in most localities in Cameroon. Overflowing bins and heaps of litter along the pavements are the order of the day. The lack of sufficient public waste bins and individuals' indifference has led to increasing littering habits and as a consequence, individuals are exposed to health hazards, especially food contamination and skin diseases.

Street cleaners say many citizens are yet to consider keeping the cities of Cameroon clean as everyone's duty because littering is a norm in Cameroon (Martin Nkematabong, 2004). Environmental experts warn of an imminent disaster because of the increasing amounts of wastes along the streets, sea, and beaches of Cameroon. According to Marshal (2014) environmentalists have called for an end to bad waste disposal habits as a solution to this problem. But, over the years, the activities of fishermen, traders, and tourists along the coastline of Cameroon have put the health of seabirds, reptiles, fish and sea mammals and human beings in jeopardy (Potential for Improving Municipal Solid Waste Management in Cameroon, 2016).

### **3.2.1 Sources of Litter in Cameroon**

Most items that are litter in Cameroon are non-biodegradable in nature and sometimes washed into the sea from residential areas or simply disposed of by individuals and ships (Nepadwatercoe.org, 2017). Research indicates that litter is a result of individual behavior, choosing to litter or being careless in the handling of waste (Jbgreenteam.org, 2017), (Brookecountyswa.com, 2017).

According to Jefferson-Belmont Regional Solid Waste Authority, 2015 and Brooke County Solid Waste Authority, litter results from:

1. Pedestrians dropping garbage in streets and roadways;
2. Motorists discarding garbage out of their vehicle windows;
3. Uncovered loads of items that are not secure are easily blown out of place and result in roadway litter;
4. Household refuse disposal and collection: Animal scavengers and the wind can dislodge unsecured items placed out on the corner of waste bins. In addition, litter also results from overloaded waste bins;
5. Commercial refuse and disposal: Poorly secured commercial refuse can easily become litter;
6. Construction projects: Litter can come from uncontrolled building waste and workers' lunchtime refuse;
7. People at leisure; Many tourists or other people who go out to have fun, end up dumping waste in the streets especially at night. It is easy to dump garbage anywhere when there are no bins to drop it inside. At times, there are bins but most people have the habit of littering even where there are bins.
8. Entertainment events: Events create large amounts of litter, which can overflow onto neighboring areas when measures to control it are not carefully planned.

9. Illegal dumping; Most people generate litter through illegal dumping of waste on public lands or owned properties. Illegal dumping attracts flies and other harmful insects to the environment. This encourages environmental decay and detrimental to the human health.

10. Intentional or habitual littering, for reasons such as laziness or acts of rebellion.

(Jbgreenteam.org, 2017) (Brookecountyswa.com, 2017).

In Limbe, litter is generated by local traders, fishermen, tourists, factories, moving vehicles, uncovered trucks, pedestrians, construction and demolition sites, households and industries.

### **3.2.2 Impacts of Littering in Cameroon**

Carelessly discarded garbage affect every member of a community; it causes harm to people and animals alike, damages our waterways, costs us money and suggests that we do not care for our environment (Jbgreenteam.org, 2017). In general, the effects of littering can be divided into environmental, health, economic and social impacts.

#### **3.2.2.1 Environmental Impacts**

The environment can be described as all that surrounds man, or simply the totality of surrounding conditions (Yourdictionary.com, 2017). In today's world, the environment is experiencing changes due to man's activities on the landscape, one of which is littering. Litter is an important environmental issue. Approximately 94% of people identify litter as a major environmental problem and yet, individuals still litter (muchemwa, 2017).

Litter dropped in roadways along the streets in towns and cities in Cameroon can travel through the stormwater systems into rivers, seas, oceans and other water bodies where it poses an imminent danger to wildlife, ecosystems, and biodiversity through entanglement, bloating, poisoning and death of fauna. Metal scraps and broken glass can cut the flesh of birds and other animals ( Marshal 2014; Demand-Medla, 2017).

#### **3.2.2.2 Health Impacts**

Litter is a threat to public health since it attracts pests and serves as a breeding ground for bacteria, rats, and other vermin, which create health hazards. Studies have shown that people who live in clean areas with lots of green spaces have much better mental and physical health than people who live in areas with a litter problem. Individuals who live in

a poor-quality environment are more likely to suffer from mental problems including anxiety and depression. People who live in areas where there are high levels of litter are more likely to be less physically active and therefore, more likely to be overweight and obese. This brings with it all the associated health risks, including diabetes, heart attacks, and strokes, and thus, put more of a strain on local health facilities (Kingdom, 2016).

In addition, items such as broken glass, bottles, syringe needles etc. can cause serious health hazard in public places such as on beaches and in parks which attract many people (tourists and locals).

### **3.2.2.3 Social Impacts**

Litter looks bad, thus negatively affecting the image, especially the appearance of communities. People should be proud of the areas that they live in. If an area has litter problems; it is going to reduce the pride that residents have in living there. When an area has a litter problem, its residents don't want to spend time there, community spirit suffers and thus people's wellbeing suffers. It also means that residents worry about other problems related to litter, such as economic impacts and anti-social behavior (Kingdom, 2016). More so, since litter attracts litter, it sends out a message that people do not care about their community and that it is acceptable to litter.

### **3.2.2.4 Economic Impacts**

Local authorities are the largest groups of land managers in Cameroon. It is therefore not surprising that they must spend the most amount of money picking up litter and keeping the land clean. It costs the taxpayers a huge amount of money to keep their communities clean. This implies that money that could be invested elsewhere in the economy is rather spent on cleaning up litter (Kingdom, 2016). A primary survey of local authorities and other land managers carried out in this study, indicated that money used to take care of litter would have otherwise been used in other investments to boost the economy, especially in the provision of portable water, roads, the building of schools, provision of employment, etc. This, therefore, implies that the economic cost of litter is extremely large.

## **3.2.3 Tourism and Littering in Cameroon**

Tourism is an important development sector in Cameroon. It has become the major contributor to the gross domestic product (GDP) in Cameroon and in 2013, tourism contributed 6.2% to the country's GDP. The number of tourists visiting Cameroon per year

has gone beyond the 500,000 visitors per year, which per World Tourism Organisation (WTO) qualifies an environment or country as a tourist destination. 912,000 tourists visited Cameroon in 2013 (WTO, 2015). However, the tourist industry in Cameroon is challenged by administrative issues such as lack of professionalism and finances to develop tourist destinations, police harassment of tourists, inadequate child care, inaccessibility to tourist sites and poor communication and marketing (Sackmen, 2003). No wonder Carole Favre, an expert and teacher of tourism at the university of London to Colchester, mentioned in an event marketing the world's tourism day in Cameroon in 2010, that “tourism in Cameroon is not developed and does not yet have a specific direction. Certainly, there are opportunities, but there is still need to develop strategies that are more thoughtful and promote collaboration between local people and the government” (Cyprian Bama Nji, 2012).

Among the many problems affecting tourism in Cameroon, littering seems to have a significant role to play. Daily, waste materials generally referred to as litter is generated, comprising of plastic bags, plastic bottles, cigarette stumps and butts, old clothes and fabrics, metal, rubber, etc. It is presumed these wastes littered around the city are generated by households.

### **3.2.4 Measures for Improvement of the Litter Situation in Cameroon**

Cameroon's municipal litter and solid waste management policy is based on a public-private partnership which ensures regular clean-up of litter, a collection of solid waste and appropriate sensitization of the public on the ills of littering (Proparco.fr, 2017).

#### **3.2.4.1 Placement and Reallocation of Public Bins**

A considerable amount of litter is generated, owing to the paucity of public waste disposal/storage bins in many municipalities in Cameroon and this serves as a major setback in litter and waste management. Presently only a single waste collection method is being used by most councils to collect waste produced in municipalities. i.e. the mixture of all types of waste such as plastics, bottles, cardboard, biological, paper, cans etc. in a single bin. The wastes are not disposed of in separate trash bins during disposal, collection, or dumping. To optimize the present collection system, two other methods of waste collection were proposed by (Colins Mosima Monono, n.d.) and these are the fixed-point collection and pre-collection.

Fixed point collection consists of placing large communal bins in designated locations for scheduled pickups. The choice of skip type, size, location and frequency of pickups is determined by the rate of waste generated, access and activities carried out in the area. This method inevitably depends on the participation rate of the residents in the community. Though it has some disadvantages like waste being stored for a longer period along the road, providing habitats for rats, vermin and exposing the waste to the population, it ensures regular collection of waste by the council from all the residents in the municipality since collection points are known and collection schedules can be properly drawn up. To reduce the negative effects that this method has on the community, smaller waste bins have been proposed at a distance intervals of 400 m along the main road, so that they can be emptied more frequently. The added advantage of covers on the proposed bins helps keep waste free from moisture from precipitation and safe from flies, rats and scavenging animals (Colins Mosima Monono, n.d.).

Pre-collection involves the movement of waste from the points of generation (the home) to municipal collection bins. Children move as much as 80% of household waste to public bins (Achankeng, 2003). This can be enhanced through the efforts of municipal authorities and community initiatives by allocation and reallocation of many such communal bins at multiple sites (Colins Mosima Monono, n.d.)

### **3.2.4.2 Presence of Private Waste collection/Disposal Entities**

In a bid to tackle the problem of litter and poor waste management in the Limbe municipality, the Limbe city council has recruited the services of a waste disposal company (HYSACAM) to meticulously clean tourist destinations. Besides, pro-enviro non-governmental organizations carry out regular beach cleaning campaigns (Nepadwatercoe.org, 2017). Almost 90% of waste collection and disposal facilities such as trash cans, trucks and bins are owned by the waste management companies and council. It was also established that the means of waste disposal used by the operators are in the order; littering, land application, council bins, burning. The popularity of littering poses a problem to waste management efforts as this offset the positive contribution associated with materials recovery (Google Books, 2017).

Unfortunately, these efforts are sometimes thwarted by the unsanctioned habits of some tourists who fail to drop rubbish, mostly plastics, in garbage cans (Africa, 2017).

### **3.2.4.3 Government Policies/Penalties**

From levying higher fines on litter culprits to mobilizing volunteers to help deter them, Cameroon is lagging on this range of measures to put in place all in an effort to keep the country clean. In many Cameroonian municipalities, a day is set apart every month by the councils for general/public clean-up campaigns. Hygiene and Sanitation teams from these councils move about, inspecting, and defaulters (those who refuse to clean their environments) are levied fines (Limbe I Council, 2016). However, there is no specific government policy regulating littering in Cameroon. Municipal councils are responsible for keeping their municipalities clean.

Penalty (via the issue of tickets) is one of the main ways to fight against littering, but it is rather unfortunate that most municipalities in Cameroon do not have a system that addresses this problem. The lack of a litter controlling body is a firm reflection of the terrible litter situation all over the national territory, and Limbe, which is the most popular touristic destination. Reports from Singapore indicate that 19,000 tickets for littering were issued in 2014 and of these, 31% were issued to non-residents. Other measures such as a double fine for continuous irresponsible behavior, corrective work orders, people power (community volunteer scheme), “No cleaners’ day” and the “Keep Singapore Clean” movements have all consolidated success in the fight against litter (National Library Board, 2017) (Singaporeans2.rssing.com, 2017).

### **3.2.4.4 Public Education for Residents and Non-Residents**

A governmental organization in charge of educating locals as well as tourists on the harms of littering is non-existent in Cameroon. In this respect, private and non-governmental organizations like the Global Conscience Initiative (GCI) and The Green Charter (Cameroon) have taken upon themselves to provide educative talks, discussions, and debates on the effects of littering to individuals, ecosystem, and biodiversity.

## 4 Materials and Method

The materials and method for this study are focused on the questionnaire structure, pre-study, the survey, and location.

### 4.1 Questionnaire structure

The questionnaire consisted of 26 questions divided into five sections which captured;

**Section A:** Demographic characteristics (*questions 1-5*)

**Section B:** Development of the litter situation in Limbe (*questions 6-10*)

**Section C:** Community's perception of the aspect of littering (*questions 11-19*)

**Section D:** Tourists' perception of the aspect of littering (*questions 20-22*)

**Section E:** Pattern of tourism (*questions 23-26*)

Some questions were fixated on the types of litter, sources of litter, distribution of litter, and the effects of litter.

#### 4.1.1 Pre-study

Prior to administering the questionnaires, desk research was undertaken to study, investigate and extract relevant articles, official reports or legal documents about littering and tourism in Cameroon. This was done to obtain solid background information to help facilitate a study built upon the effects of littering on tourism in Limbe, Cameroon.

Secondly, a meeting took place with the ex JCI Limbe Atlantic (Junior Chambers International) president, who has been involved in several environmental sustainability research projects in order to get information or guidance on where and how to go about the research in Limbe. The purpose of this meeting was to get some relevant information on past successful JCI projects done in Limbe that would help in the study, to know if an authorisation is required before conducting interviews or distributing questionnaires, and the legal authority responsible for this authorisation.

Finally, an application for authorisation to conduct the study in Limbe was made to the Limbe I municipal council which was approved. The goal here was to get authorisation to conduct interviews and distribute questionnaires within the study areas. The Limbe 1 municipal council also authorized the tourism department of the council to assist in the project.



As a result, the tourism department of the Limbe I council organized meetings with government officials and other private officials such as the Divisional Delegate of Tourism, Tourism officer, Bimbia, Regional Delegate of Tourism, and Tour Guide Director, Limbe. All these officials were directly linked to tourism with the aim of realizing this project. The purpose of the meeting was to communicate the goal of the research to them, gather relevant information that would help realize the project and get assistance on targeted areas for the survey, and distribution of the questionnaires.

#### **4.1.2 The survey**

The distribution of people who took part in the survey was done randomly and it lasted for two weeks. Respondents who couldn't respond to the questions right away, such as government officials, shop owners and employees in the targeted areas, took the survey home to have enough time to answer the questions. At the end of the survey, simple statistics was applied using the Statistical Package for Social Sciences (SPSS) Software.

The instructions at the beginning of the questionnaire gave a brief description of the objectives of this study. The questions were formulated in English and made to be as simple as possible to keep participants in line with the purpose of the study. Interpretation of the questionnaires was available for respondents who didn't understand English properly and it was easy to communicate to them because they speak either pidgin English or French fluently and a confidentiality statement was included to make respondent understand that, their personal information will not go public. Verification of this instrument was done by prior submission to the supervisor, who approved and gave a go ahead.

#### **4.2 Location**

This study was carried out in Limbe, known as the Town of Friendship, located 4.02 latitude and 9.21 longitude and it is situated at elevation 69 meters above sea level. Limbe has a population of 72,106, making it the 2nd biggest city in South-West Region (WorldAtlas, 2017). Limbe is also a seaside city in the Southwest region of Cameroon, surrounded by rolls and rolls of oil palms, which were planted during the colonial days (All-About-Cameroon.com, 2017). It is one of two major coastal cities in the country with beautiful black sand beaches. Apart from being one of the top four commercial ports in

Cameroon where coffee, cocoa, cotton, sugar, tobacco, rubber and palm oil are traded, it is also considered a good tourist city in the country (Page, 2009).

Respondents were enrolled from five different sites in Limbe; Down Beach, Seme Beach, the Limbe Botanical Gardens, the Limbe Wildlife Centre and, the Slave Village, Bimbia.

Down Beach is located in New Town and is one of the most visited places in Limbe. It is a black sandy beach, which has been and still is, a tourist attraction area in the country. It is notable for its delicious roasted sea mammals such as fish, crayfish, crabs etc. which are often complimented with well-seasoned pepper, roasted plantains and “miyondo” (cooked ground cassava flour). Tourists and locals flood in on a daily basis to get a feel of this local ambiance and to taste these delicacies. (Black, 2014)

Seme Beach is a private beach in Hotel Seme Beach, located along the Idenau Road (Mile 11), (Team, 2017)

The Limbe Botanical Gardens is in Bota. It provides a peaceful escape from the nearby bustling city with its thematic gardens, majestic trees, and ideal settings. It stands beside Mount Cameroon and the country’s extensive national park system as one of the outstanding places of interest in the country (Bgci.org, 2017).

The Limbe Wildlife Centre is in Bota and houses a bedraggled collection of Cameroonian wildlife, mainly monkeys, and apes. Presently, it is home to 15 primate species native to Cameroon, including gorillas, chimpanzees, drills, mandrills, baboons, 3 mangabey species and, 7 guenon species. It serves as a touristic destination as it is a good place for visitors to see this variety of local fauna. (Limbe Wildlife, 2017).

The Slave Village is located in Bimbia and though small in size, it stands out as an iconic destination for historical tourism in Cameroon. This site has been an attraction to many visitors from within and out of the country who visit the area. The slave village is also unique in religious tourism in that, it harbours the relics of the first ever church on the Cameroonian soil built by the Baptist missionary Alfred Saker in the 1850’s (Wonderoon, 2014).

These places were chosen because they harbor beautiful structures, artifacts and history, thus, are notable touristic sites. In addition, since these are public places, littering is a common phenomenon, thus, a high response rate and reliable information can be documented in these places.

## 5 Results

A total of 55 questionnaires were self-administered and a response rate of 90.9% was obtained. According to Mugenda and Mugenda (1999), a response rate of 60% is good and above 70% is perfect. Since this study recorded a response rate of 90.9%, it is excellent

### 5.1 Background Information on the respondents

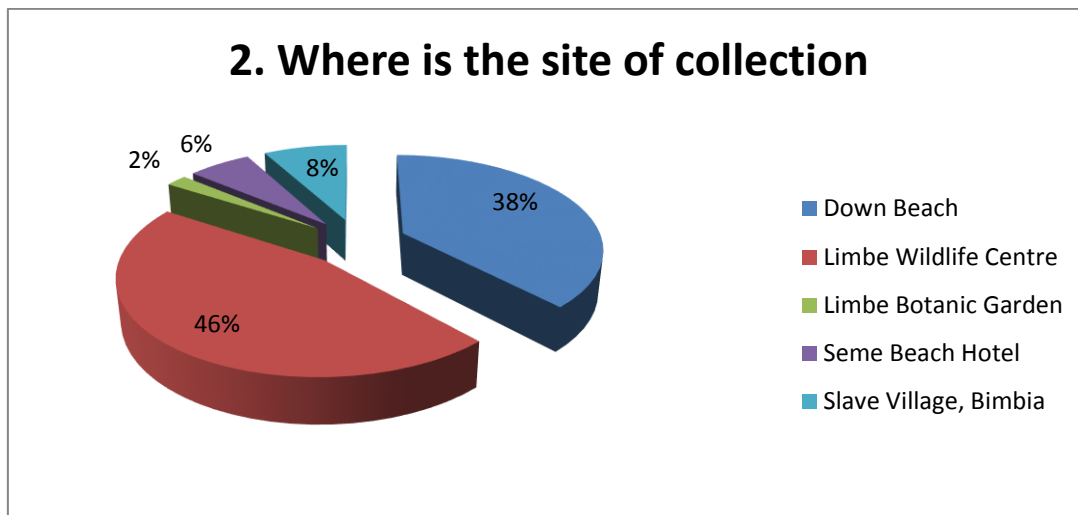


Figure 2: Study Collection Sites

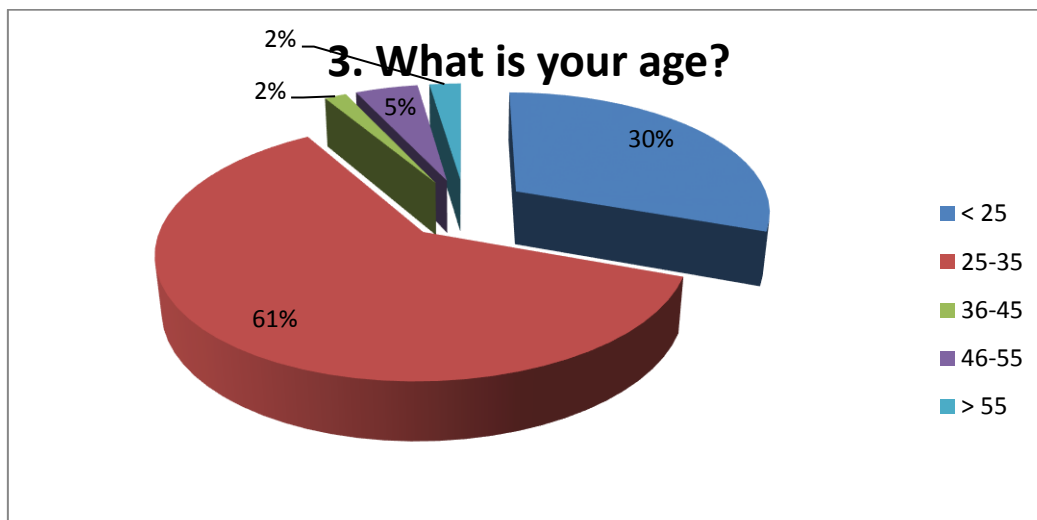


Figure 3: Age of Respondents

Many respondents were interviewed at the Limbe Wildlife Centre compared with the Limbe Botanic Garden that had the least number of respondents (*Figure 2*). Efforts were made to hand out the questionnaires equitably at the different collection sites but limited number and non-compliance of potential respondents at certain sites made it impossible to attain equivalence in the distribution of respondents.

From *figure 3* above, the highest number of responses was from individuals between 25 and 35 years old (61%). Respondents under 25 years old corresponded to 30% of the study population. 5% of respondents indicated they were between 46 and 55 years old and two groups (between 36- 45 years old and >55 years) made up 2% each of the sample. However, this study didn't go further to evaluate if there was a correlation between age and willingness to respond to questionnaire items.

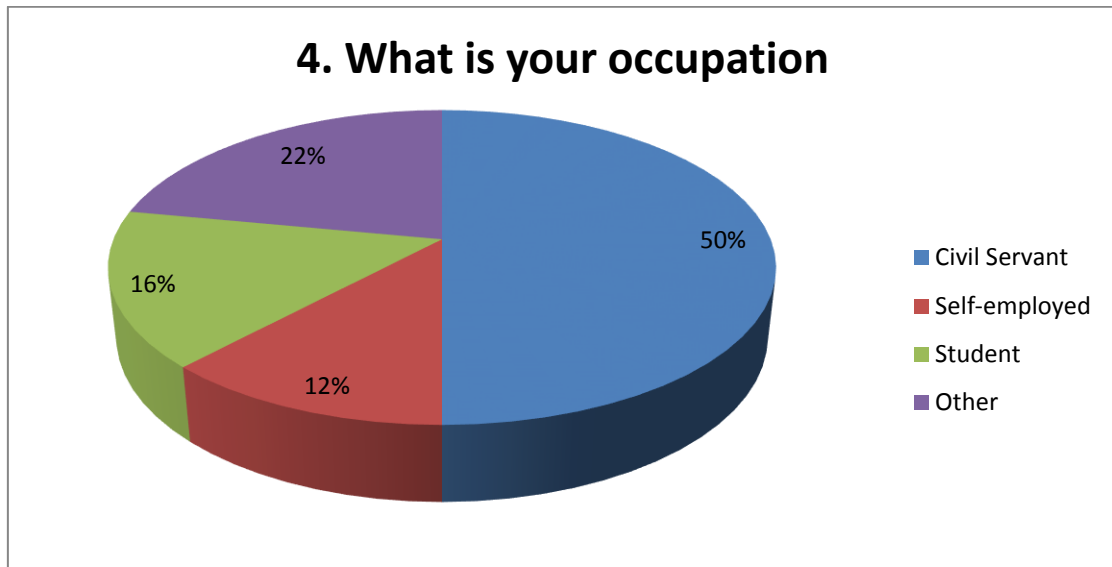


Figure 4: Occupation of Respondents

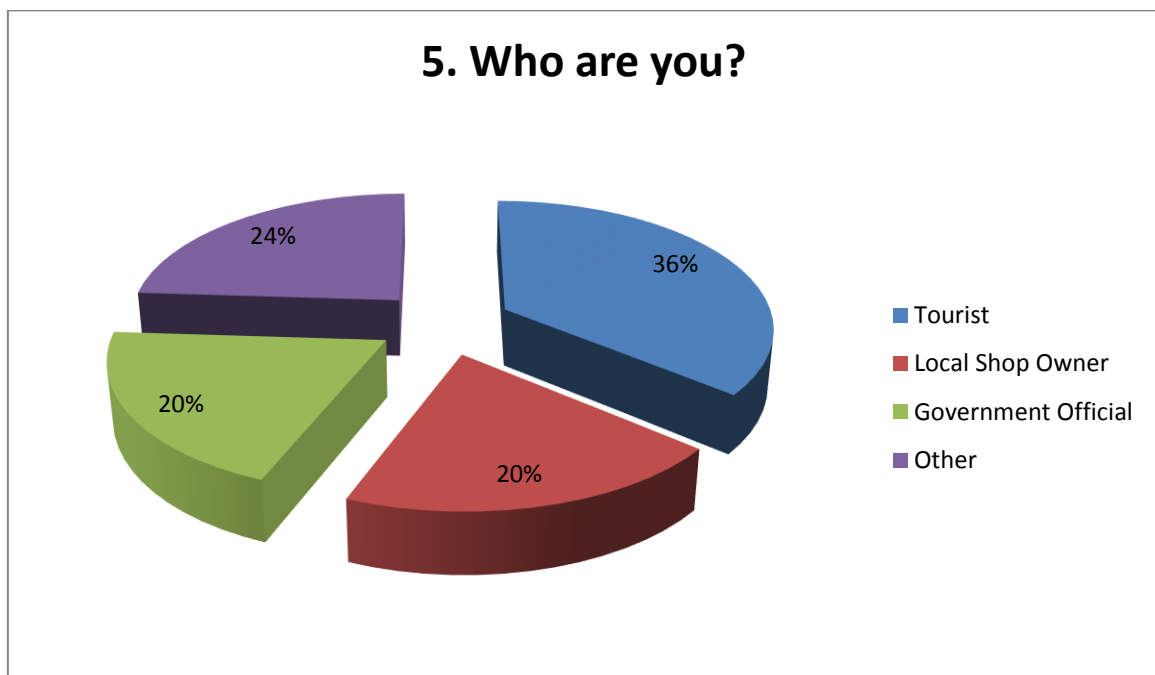


Figure 5: Identification of Respondents

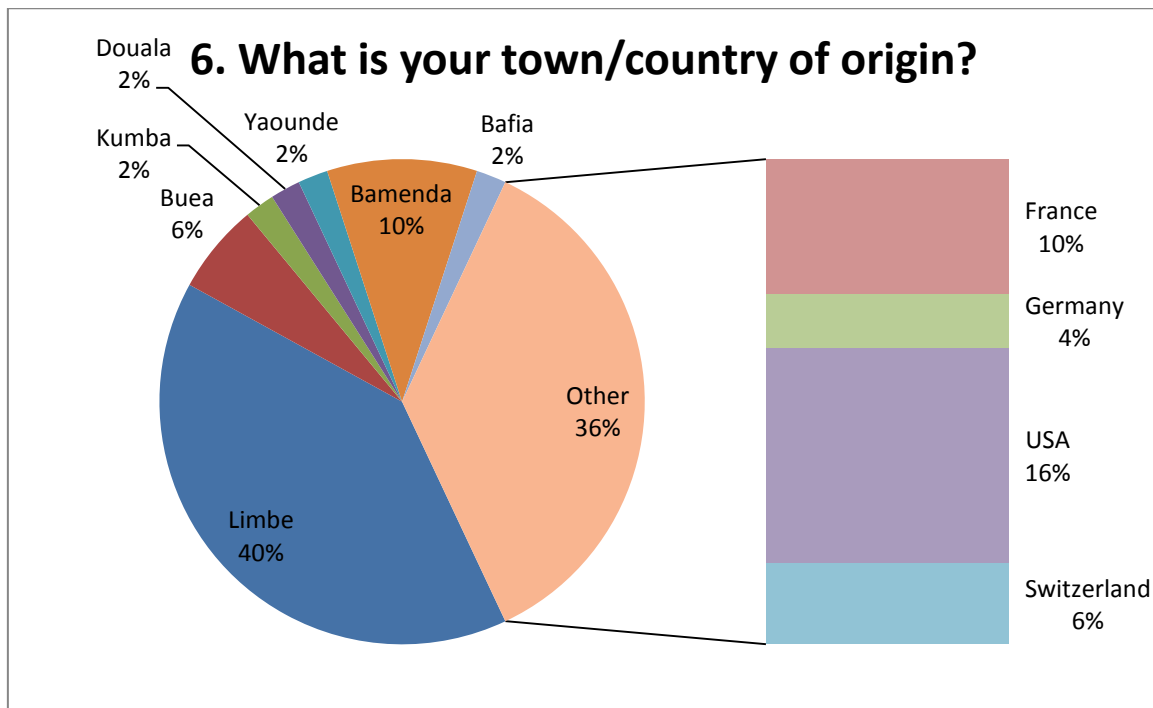


Figure 6: **Town or Country of Origin of Respondents**

*Question 4* sought to document the occupation of both locals and tourists enrolled in this study. The main occupations of the locals are receptionist, cleaner, administrator, artist, teacher, volunteer, trader, shop owner, bar manager, clerk, nurse and civil servant while the main occupations of tourists are tourist guide, consultant, nurse, student, housewife, volunteer, technical assistant, medical doctor, administrator, Geo-ecologist, animal keeper, and business. 50% of respondents were into civil service practicing Medicine, Law, Gynecology, etc., 22% were involved in other works of life such as trade, business, cleaning, 16% indicated they were students and 12% stated they were self-employed (*Figure 4*).

*Question 5* assessed the identity of respondents. 36% of participants were international tourists, 24% were either national tourists or indigenes visiting or re-visiting the town, 20% affirmed they were local shop owners and another 20% pointed out they were government officials (*Figure 5*).

*Question 6* gauged the town and/or country of origin of the respondents. Findings of this inquiry indicate that 64% of respondents were indigenes of Cameroon hailing from some cities (Limbe, Buea, Kumba, Bamenda, Bafia, Douala and, Yaoundé) while 36% were international tourists from different countries (USA, France, Germany and, Switzerland) (*Figure 6*).

## 5.2 Development of the Litter Situation in Limbe

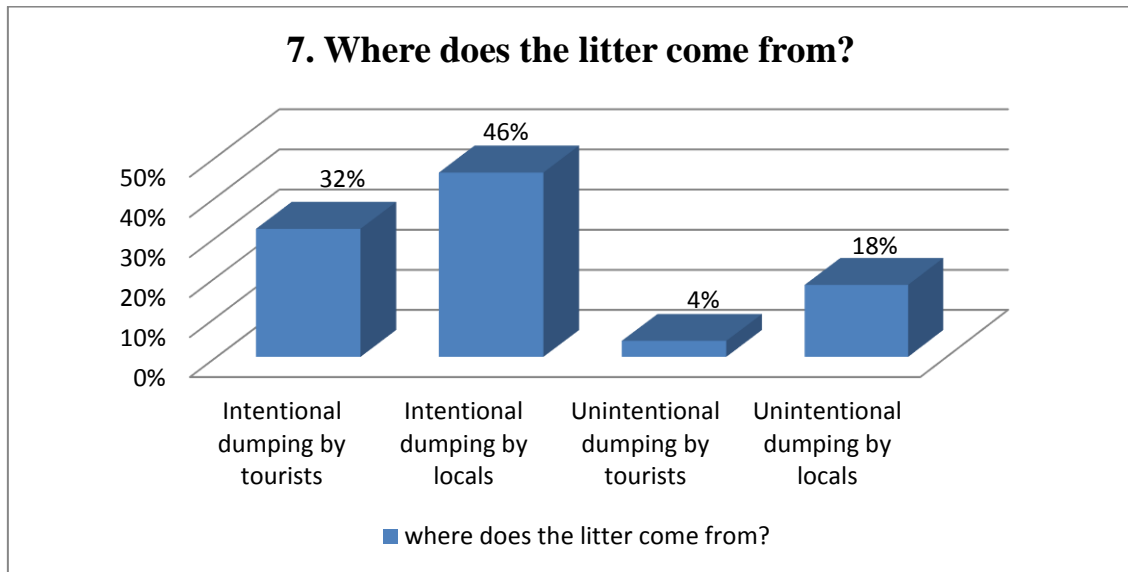


Figure 7: **Origin of Litter in the Limbe Municipality**

Regarding *Question 7*, respondents were asked to specify in their view, the generators of litter in Limbe. 46% alleged that litter originated from intentional dumping by locals, followed by 32% who believed that the intentional dumping was done by tourists. In addition, 18% of respondents held that litter coined from unintentional dumping by locals followed by 4% who thought that tourists did the unintentional dumping (*Figure 7*).

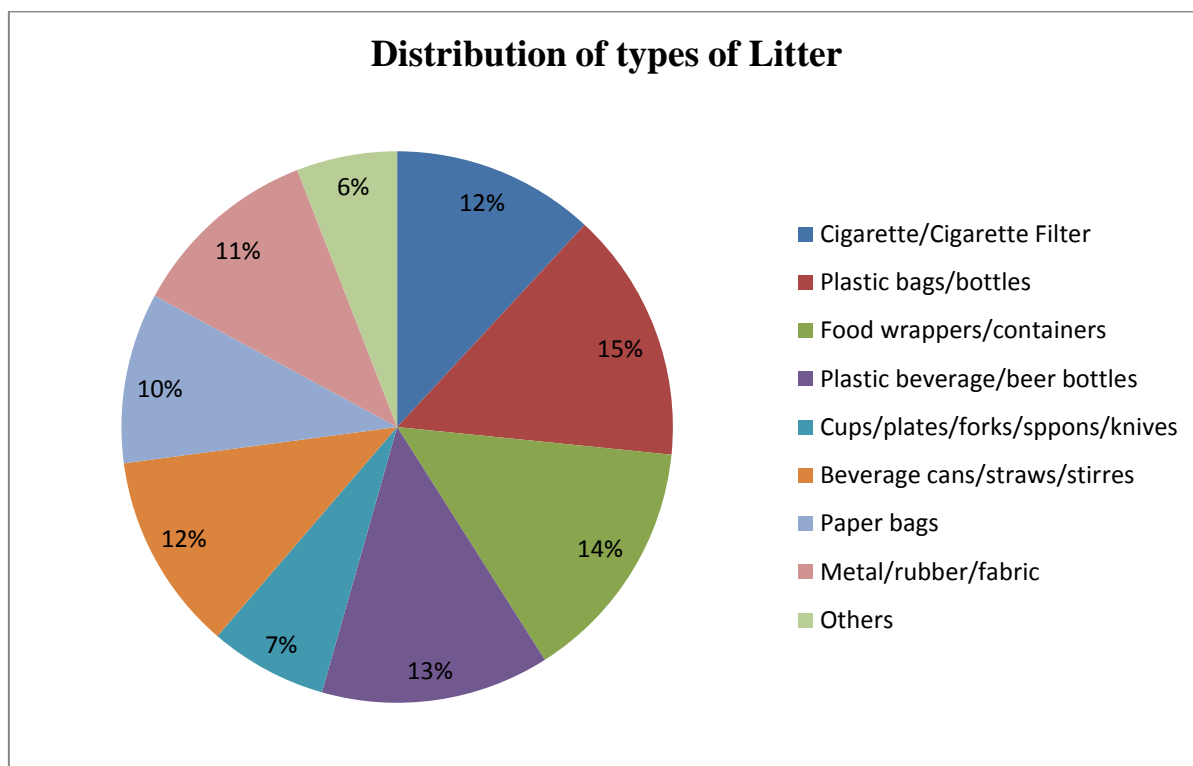
### 8. What are the different forms of litter in Limbe?

In relation to *Question 8*, respondents were given the opportunity to choose the different types of litter found in the Limbe municipality. 76% alleged that cigarettes and cigarette filters constitute a proportion of litter composition in Limbe, 94% pointed out plastic bags and bottles, 92% named food wrappers and containers, 86% said plastic beverage and beer bottles were major constituents, 44% listed cups, plates, forks, spoons and knives, 74% indicated beverage cans, straws and stirrers, 64% named paper bags, 72% listed metal, rubber, and fabric and, 38% stated other types of litter such as dead leaves, fruit peelings, faeces etc. (Table 1).

**Table 1:** Different forms of litter in Limbe

Types of litter	Responses (%)	
	Yes	No
Cigarette/cigarette filters	76	24
Plastic bags/bottles	94	6
Food wrappers/containers	92	8
Plastic beverage/beer bottles	86	14
Cups/plates/forks/spoons/knives	44	56
Beverage cans/straws/stirrers	74	26
Paper bags	64	36
Metal/rubber/fabric	72	28
Others (fruit peelings, dead leaves, etc.)	38	62

With the above findings, this study went further to evaluate the relative distribution of the different types of litter in terms of abundance found in the Limbe municipality (Figure 7).

**Figure 8: Distribution of types of Litter in Limbe**

Plastic bags and bottles were most abundant as they made up 15% of all types of litter in Limbe, followed by food wrappers and containers that constituted 14%, then plastic beverage and beer bottles that made up 13%. Cigarettes and cigarette filters and beverage cans, straws and stirrers constituted 12% each, metal, rubber and fabric made up 11%, paper bags followed with 10%, cups, plates, forks, spoons, and knives made up 7% and, others (fruit peelings, dead leaves, faeces, etc.) were the least abundant making up 6% (Figure 8).

### 9. Has littering increased with time?

The purpose of *Question 9* was to assess the pattern of littering over the years. Findings on this questionnaire item reveal that 42% of respondents believed littering has increased with time, 44% held that littering has not escalated over the years while 14% couldn't give a concise answer as to this pattern (*Table 2*).

**Table 2:** Changes in Littering

<b>Changes in Littering</b>		
<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
No	22	44.0
Yes	21	42.0
I don't know	7	14.0
Total	50	100.0



#### 10. What area is most affected?

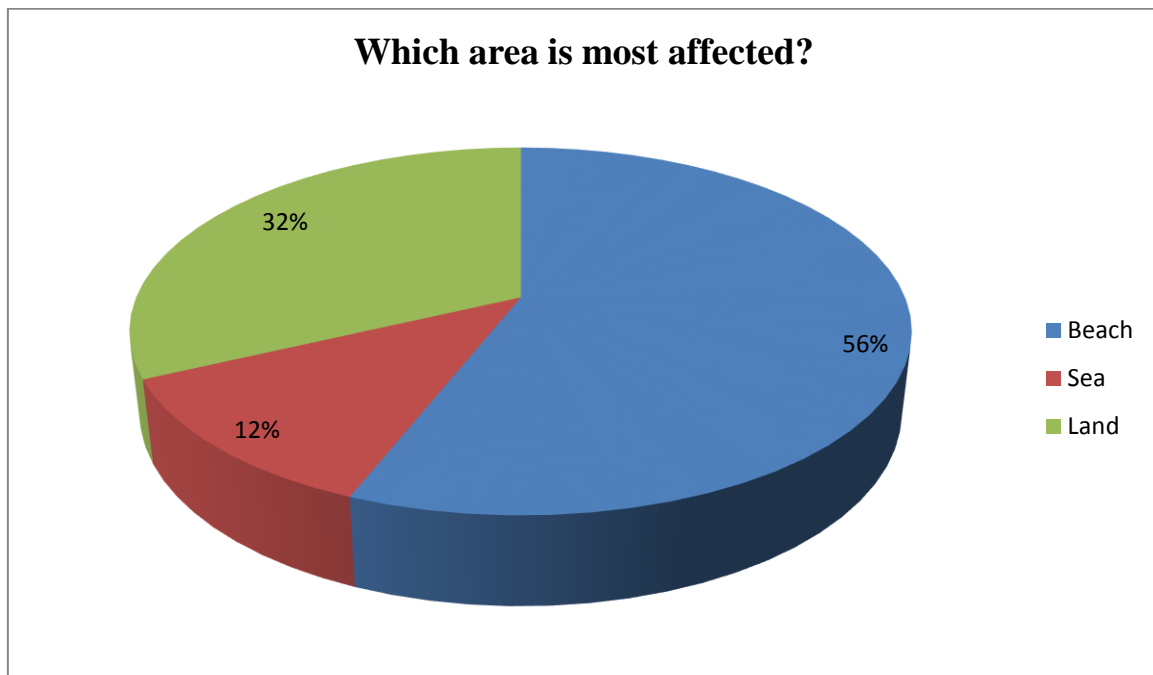


Figure 9: Area most affected by Littering

This study went further to document respondents' views as to which area is most affected by littering. 56% asserted that the beach was the most litter-affected area, 32% said the land was most affected and, 12% emphasized the sea was the most affected area (*Figure 9*).

### 5.3 Community's Perception of the aspects of littering

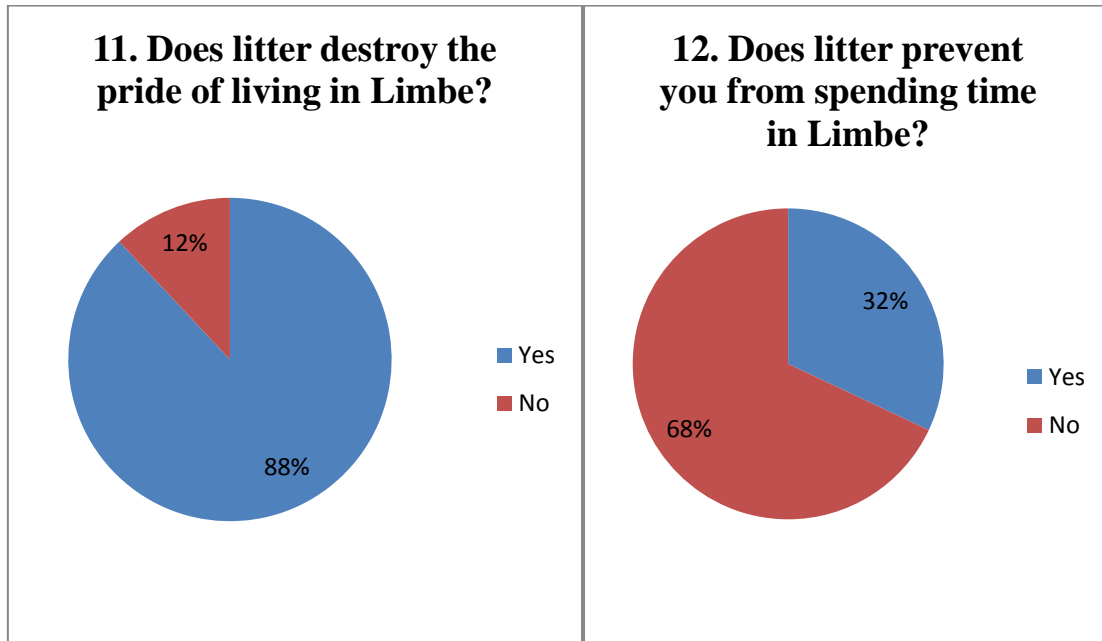


Figure 10: Effect of litter on the pride of living in Limbe

Figure 11: Effect of litter on the time spent in Limbe

*Question 11* sought to investigate the effect littering has on the pride of living in Limbe. 88% of respondents stressed that litter actually destroys the pride of living in Limbe while 12% of respondents disagreed with this opinion (*Figure 10*).

The purpose of *Question 12* was to find out if litter had an effect on the length of time spent by respondents in Limbe. 68% of these participants indicated that litter had no influence on the time spent in Limbe while 32% emphasized that litter had an effect on the amount of time they spent in Limbe (*Figure 11*).

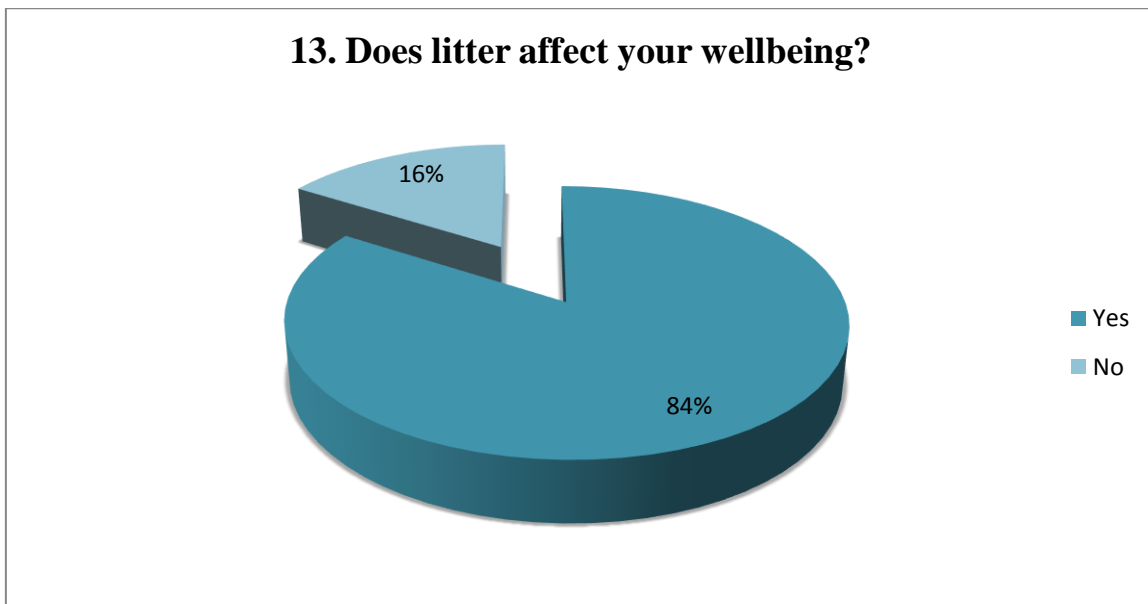


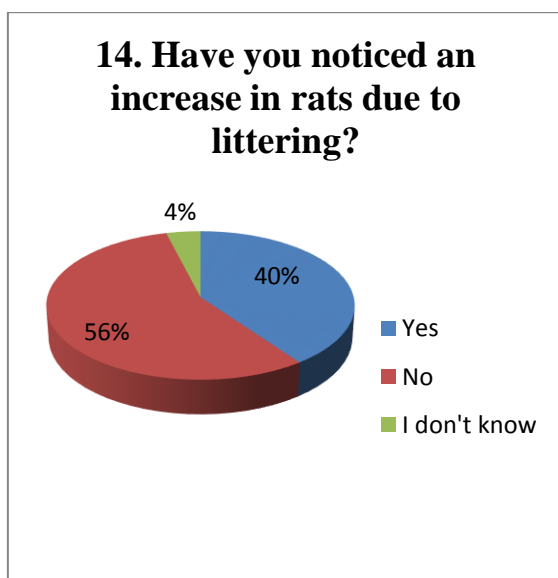
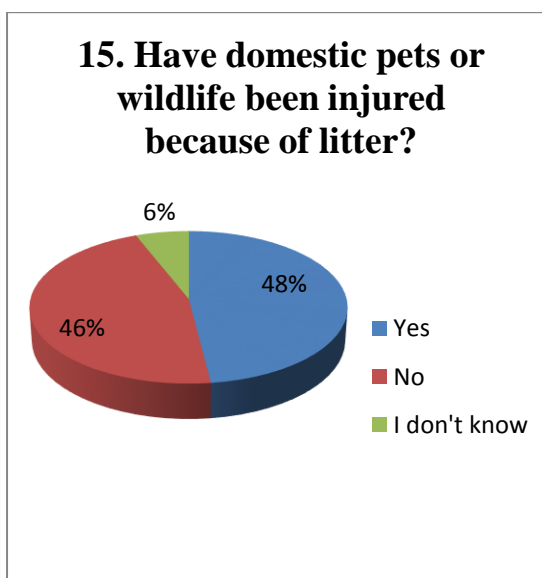
Figure 12: Effect of Litter on the wellbeing of respondents

The purpose of *Question 13* was to evaluate if litter had an effect on the wellbeing of respondents. The occupation of the majority of the respondents as aforementioned had a significant role to the response rate of this question. Many of the respondents are linked to tourism, health, business, sanitation or the environment. Of these, 84% of respondents affirmed that litter affected their wellbeing while 16% segregated from this view (Figure 12).

When probed further on the different effects litter had on respondents, 32% said litter causes pollution which is dangerous to their health, followed by 16% of respondents who indicated that litter served as a breeding ground for germs, parasites, and bacteria which cause diseases. Another 16% of the respondents affirmed that living in unclean environments is messy, awful and sometimes creates a feeling of unhappiness, 12% stated that too much litter affected the atmosphere and thus climatic conditions and 8% ascertained litter constituted a nuisance (*Table 3*).

**Table 3:** Effects of Litter on the wellbeing of Respondents

Effects of litter	Frequency	Percentage (%)
Causes pollution which is dangerous to our health	16	32.0
Serves as breeding ground for germs, parasites, and pests which cause diseases	8	16.0
Living in an unclean environment is messy, awful and sometimes creates a feeling of unhappiness	8	16.0
Too much litter influences the atmosphere and thus climatic conditions	6	12.0
Constitutes a nuisance	4	8.0
Total	42	84

**Figure 13: Effects of litter on increase of rats****Figure 14: Effect of litter on domestic the pets and wildlife**

In relation to Question 14, respondents reacted to this item by stating whether they had noticed an increase in rodents such as rats due to litter. 56% respondents repudiated that they had not noticed an increase in rates owing to litter, 40% affirmed that they had noticed

an increase rates in rats due to this phenomenon and, 4% did not know if there was any change in the number of rats, or whether or not it was due to litter (Figure 13).

Regarding Question 15, respondents were asked if domestic pets or wildlife had ever been injured due to litter. 48% were certain these creatures had been injured by litter, 46% denied that no domestic pet nor wildlife had been injured because of litter and 6% had no idea on injuries on domestic pets or wildlife due to litter (Figure 14).

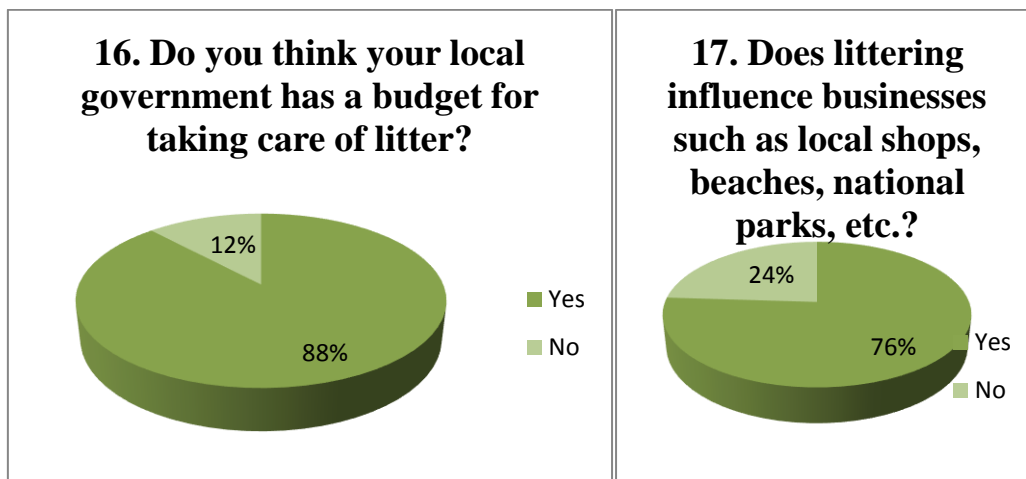


Figure 15: Allocation of litter by local government

Figure 16: Effect of littering on local businesses

In *Question 16*, respondents were asked if the local government allocated a budget for taking care of the litter. 88% of respondents agreed while 12% of respondents differentiated on this view (*Figure 15*).

Question 17 gave respondents the opportunity to state whether littering influenced local businesses such as shops, beaches, parks, etc. 76% of respondents confirmed that littering negatively influenced local businesses while 24% said that littering had no effect on local businesses (*Figure 16*).

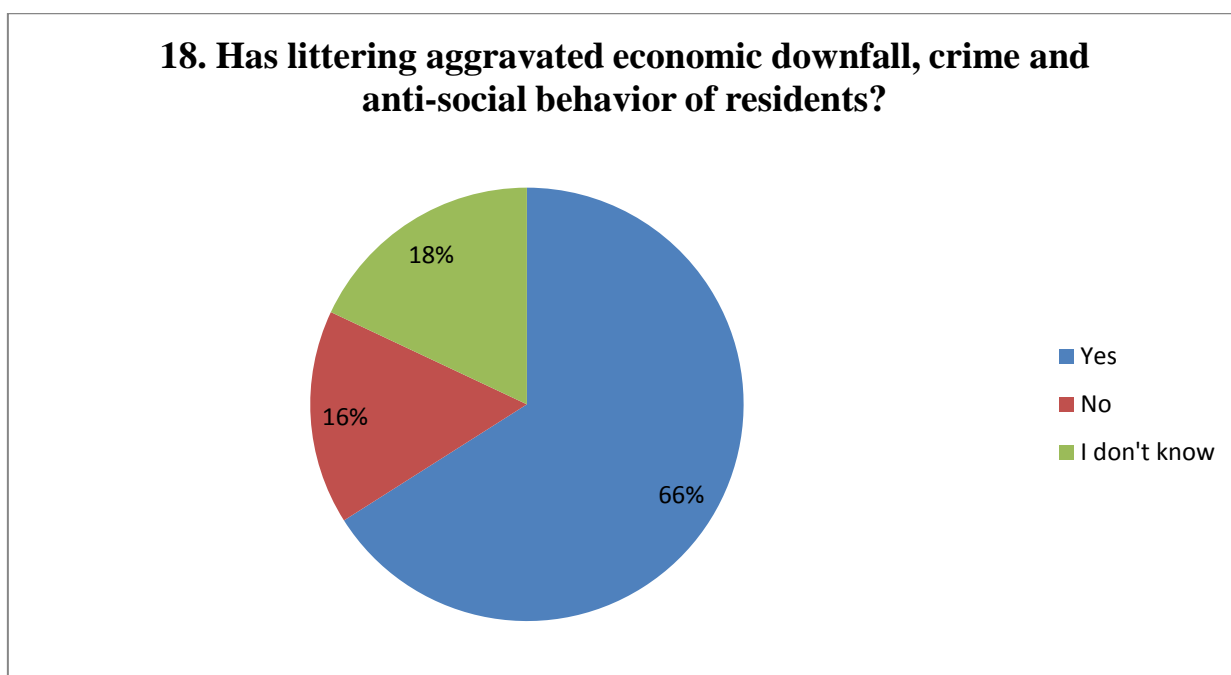


Figure 17: **Effect of littering on economic downfall, crime, and anti-social behavior**

The purpose of Question 18 was to evaluate if littering aggravated economic downfall, crime, and anti-social behavior. 66% of respondents were of the opinion that littering does aggravate economic downfall, and anti-social behavior, 16% said littering had no effect on these phenomena and 18% were not certain whether or not littering aggravated economic downfall, crime and anti-social behavior (Figure 17).

### **19. What do you think can be done to solve the litter problem in Limbe?**

In relation to Question 19, respondents were asked to propose solutions to the litter problem in the municipality. 30% of respondents stated that the government needs to invest in the waste sector through the creation of trash and litter burning buildings, recycling systems and employment of more individuals to take care of the litter.

This was followed by 28% of respondents who stressed more sanitation and cleanliness campaigns and competitions involving prize awards, 14% proposed that the municipality organizes infrastructural development and, also, increase incentives allocated to cleaning the environment. Another 14% pointed out that the government should place law enforcement orders on littering and penalty levies on defaulters (*Table 4*).

**Table 4:** Proposed solutions to the litter problem in the Limbe municipality

<b>Proposed solutions to the litter problem</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Government needs to invest in the waste sector i.e. creation of little trash and litter burning buildings, recycling systems, and employ more people to take care of litter	15	30.0
More sanitation/cleanliness campaigns should be done by the council and they should work with NGOs to educate people on a personal commitment to stop littering. Cleanliness competitions involving prize awards should be organized	14	28.0
Municipal organization of infrastructural development and an increase in incentives to clean the environment.	7	14.0
The government should place law enforcement orders and penalties for littering and dumping by defaulters.	7	14.0
Organizing workshops and training on the dangers of littering and educating the population on how to manage domestic waste.	4	8.0
The government should control the use of plastic bags, bottles etc. and also increase the number of waste bins, placing them at waste-prone strategic locations such as along public roads, markets.	2	4.0
Signboards indicating "No Littering"	1	2.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

In the same light, 8% of respondents stipulated that workshops and training on the dangers of littering and proper domestic waste management should be organised, followed by 4% of respondents who suggested the government should control the use of plastic bags and bottles, and also increase the number of waste bins, placing them at waste-prone strategic locations in the city. 2% of respondents recommended that signboards with “No Littering” be placed along roads and in streets in the city (*Table 4*).

## 5.4 Tourists' Perception of the aspects of littering

### 20. What effect does litter have on you?

**Table 5:** Effects of litter on tourists

Effects	Frequency	Percentage (%)
Health issues such as breathing difficulties due to foul smell,	6	33.3
pollution and destruction of nature	5	27.8
Demotivation	4	22.2
Discomfort, nasty feeling	3	16.7
Total	18	100.0

Concerning Question 20, tourists gave their opinion on the effects litter had on them. 33.3% of respondents complained of health issues such as breathing difficulties due to the foul smell, 27.8% complained of pollution and destruction of nature, 22.2% said they were demotivated at the sight of litter and, 16.7% had discomfort and a nasty feeling at the sight of litter (*Table 5*).

### 21. Do you perceive that a city is uncared for when it is littered?

**Table 6:** Tourists' perception on litter and cleanliness of a city

Response	Frequency	Percentage (%)
No	4	22.2
Yes	14	77.8
Total	18	100.0

The purpose of Question 21 was to document if respondents perceived a city was uncared for when it is littered. 14 (77.8%) of the 18 tourists confirmed they perceived a city was uncared for when littered while 4(22.2%) denied that they did not feel a city was uncared for if it was littered (*Table 6*).



## 22. Does littering discourage you from visiting again?

**Table 7:** Tourists' Perception on litter and effect on subsequent visits

	Frequency	Percentage (%)
No	9	50.0
Yes	9	50.0
Total	18	100.0

Question 22 sought to document whether littering negatively influenced tourists' decisions on re-visiting the city of Limbe. The findings indicate that the views of respondents were equally split as 50% accepted that littering discouraged them from visiting again while the other 50% denied that littering did not discourage them from revisiting (Table 7)

**Table 8: Pattern of Tourism in Limbe**

	Frequency	Percentage (%)
No	3	6.0
Yes	47	94.0
Total	50	100.0

In question 23, all respondents were asked to provide their views on the change in the number of tourists who visit Limbe. 94% of respondents indicated that there was a change in the pattern of tourism while 6% held that there was no change in the number of tourists who visited Limbe (Table 8).

This study went further to document the specific change implied by respondents as to the pattern of tourism. 54% of the 94% who alleged a change in the number of tourists in Limbe affirmed that this change was positive i.e. the number of tourists who visited Limbe has increased. Whereas, 40% of respondents indicated that the number of tourists who visit Limbe over the years has decreased (Figure 17).

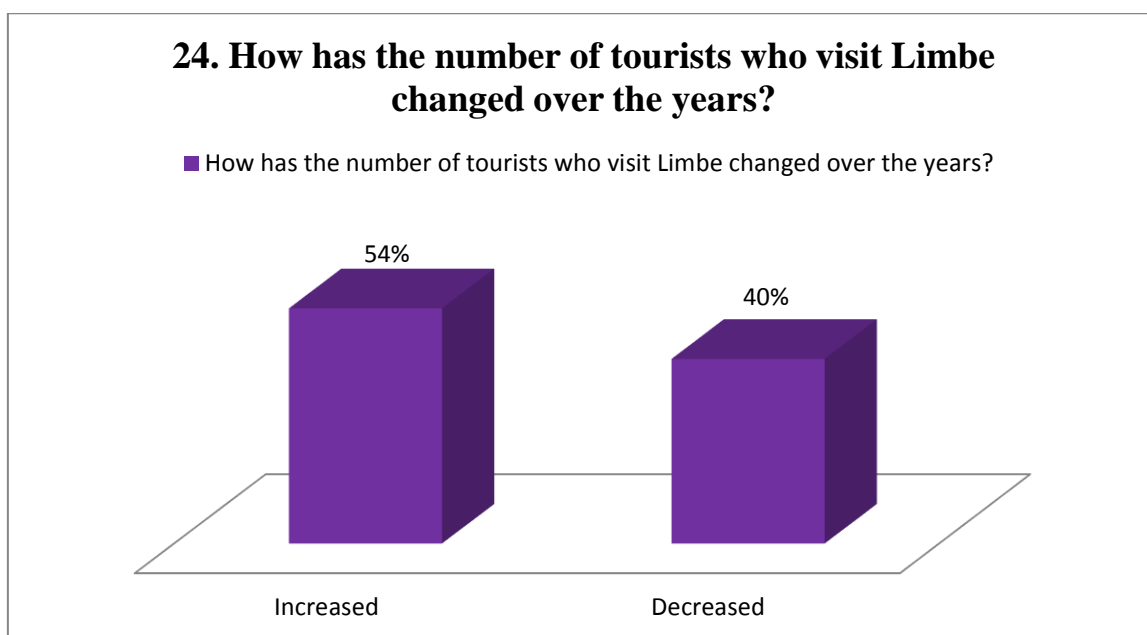


Figure 18: Change in the number of tourists who visit Limbe

**25. What has affected it?**

Table 9: Factors affecting the pattern of tourism in Limbe

Factors affecting pattern of tourism		Frequency (N)	Percentage (%)
<b>Increase in tourists</b>	Football tournaments in Limbe	13	26.0
	Beautiful touristic sites	5	10.0
	Developmental changes	2	4.0
	Upsurge of travel information on the internet	4	8.0
	Government policy	3	6.0
<b>Decrease in tourists</b>	Instability and violence in the country	5	10.0
	Indifference and carefree attitude of locals	3	6.0
	Poor environmental situation	3	6.0
	Infection with tropical diseases such as malaria	4	8.0
	Little or no development	3	6.0
	Litter problem, uncleanliness, poor care, harassment of tourists, inhospitable individuals	5	10.0
<b>Total</b>		50	100.0

In *Question 25*, participants were probed further on possible reasons why the pattern of tourism in Limbe has changed over the years. For those who said it had increased, factors such as Football tournaments (26%), beautiful touristic sites (10%), developmental changes (4%), upsurge of travel information on the internet (8%) and government policy (6%), were listed as possible reasons for this boost in numbers (*Table 9*).

Those who advocated a decrease listed factors such as; instability and violence in the country (10%), indifference and carefree attitudes of locals (6%), poor environmental situation (6%), tropical infections such as malaria (8%), little or no development (6%), litter problem, uncleanliness, poor care, harassment of tourists, inhospitable individuals (10%) (*Table 9*).

## 26. What decides where tourists go in general?

Table 10: Determining factors of tourists' destinations

Factors determining tourist destinations	Frequency (N)	Percentage (%)
The beauty and sweetness of the city/town	14	28.0
Presence and state of a beach	11	22.0
Ecotourism, comfort, and culture	7	14.0
Leisure and pleasure	6	12.0
The governing body, available hotels, advertising, and information from other tourists	6	12.0
Adventure	5	10.0
Political manipulation	1	2.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

In order to find out what determines where tourists go in general, responses from respondents on this item were documented. 28% of respondents listed the beauty and sweetness of a town or city as a major determining factor, followed by 22% who said the presence and state of a beach were their own main factor. Also, 14% of respondents alleged ecotourism, comfort, and culture as a factor, 12% said it was all about the leisure

and pleasure involved, another 12% indicated the governing body had a huge role to play coupled with available hotels, advertisements and prior information from other tourists. To 10% of respondents, it was all about adventure and 2% indicated that touristic destination is as a result of some sort of political manipulation (*Table 10*).

## 6 Discussion

The Limbe municipality is one of the main touristic destinations in the country but is challenged by a serious litter problem and the damage caused by this phenomenon is evident both in the short term and over an extended period of time.

The sustainability of the tourism industry in Limbe is heavily dependent on the extent to which the municipality's environmental situation matches its image.

The main finding of this study about tourists' perception was that they notice Limbe has a litter problem which appears to be affecting the legendary beautiful image of the city.

This study was undertaken to assess the effects of littering on tourism in Limbe, Southwest Region of Cameroon. To achieve this, the development of the litter situation, the areas that are most affected by littering, community's perception of the aspects of littering, tourist's perception of littering, and the pattern of tourism in Limbe were gauged.

Evaluation of the origin of litter in Limbe from the perspective of respondent indicated that 56% of the litter was generated from intentional dumping by locals, 32% to be from intentional dumping by tourists, 18% from unintentional dumping by locals and 4% from unintentional dumping by tourists according to the respondents of this survey.

Relating to the different forms of litter present and their abundance, plastic bags and bottles were most abundant (15%), food wrappers and containers constituted 14%, plastic beverage and beer bottles made up 13%. Cigarettes and cigarette filters and beverage cans, straws and stirrers constituted 12% each, metal, rubber and fabric made up 11%, paper bags followed with 10%, cups, plates, forks, spoons, and knives made up 7% and, others (fruit peelings, dead leaves, faeces, etc.) were the least abundant making up 6%. These findings are similar to the Clean-up Australia Day- Rubbish Report (2010) whereby plastic (including polystyrene) was the most common litter item. Similarly, miscellaneous items that included cigarettes and cigarette butts followed at 18% according to this same report. Contrary to the findings of this study, Clean-up Day in Australia reported wood and rubber as the two smallest sources of litter (Clean-up Day Australia-Rubbish Report, 2010). The difference may be because the most significant rubber item removed is tyre. Wood products are often treated with paints, lacquers, resins as well as toxic preservatives such as chromate copper arsenate (CCA) (Clean-up Day Australia-Rubbish Report, 2010).

Littering on beaches appears to have attracted the most attention (56%), followed by littering on land (32%) and in the sea (12%). This is inconsistent with previous findings by the Clean-up Day Australia-Rubbish Report (2010) that reported consistently between

2008 and 2010 that outdoor transport sites were the most littered followed by shopping malls, then beaches. This could be due to wind, waves, and currents that push the floating litter to beach sites, insufficient trash bins, social disobedience, bad habit etc. It could also be due to the differences between the two sites (Limbe and Australia) in terms of the city structure, population, location, and shelter

Respondents gave their perceptions on the aspects of littering and similarly to points raised by Rinkesh (Conserve Energy Future, 2017), 88% of individuals agreed that littering destroyed the pride of living in a municipality such as Limbe. 68% of respondents also stated that litter prevented them from spending time in Limbe. Litter is smelly and dirty and can be dangerous and unhealthy for our environment. Thus, it affects communities and people who live there and they, in turn, dissociate themselves from the image of the city. Still owing to these negative effects, they tend not to spend enough time in Limbe.

Litter has serious effects on the wellbeing of individuals and animals alike. In this study, 84% of respondents were quick to react to the fact that litter affects their well-being, 40% stated they had noticed increased rates in rats due to litter and 48% alleged domestic pets and wildlife had been injured due to litter. According to the JB Green Team (2016), litter is a threat to public health. Litter attracts vermin (pests, rats, nuisance animals) and is a breeding ground for bacteria. One of the harmful organisms is scavengers. These have a devastating effect on crops and this indirectly affects domestic pets and wildlife which may ingest these chemical objects or even metal. Also, litter eventually ends up in water bodies. This leads to the repeated killing of fish on a daily basis and the gradual depletion of marine life, thus causing more underwater species to become endangered. On land, items such as nets, broken glass and syringes can be a health hazard in public places and also injurious to domestic pets and wildlife. These findings are consistent with reports from Royal Society for the Prevention of Cruelty to Animals (RSPCA) that receives approximately 5,000 calls a year regarding animals that have been injured by litter (RSPCA, 2016).

Litter can be controlled and to assess measures put in place to take care of this phenomenon, respondents gave their opinion as to whether the local government has a budget for picking up litter. 88% of respondents pointed out that it costs the local government millions to pick up litter, reverse the effects of littering and prevent litter. The monetary cost for these efforts could be drastically reduced and used for other environmental projects if people would dispose of garbage properly, recycle and reuse (Kingdom, 2016).

In addition, 76% and 66% of respondents suggested that litter affects local business and aggravated economic downfall, crime and anti-social behavior of residents respectively. This ties with Kingdom (2016) and Keep Britain Tidy (2016) reports, litter has a negative impact on local businesses as people wouldn't want to sit around litter. Also, in the form of brand association, if a company's packaging is often seen as litter, it damages the reputation of the product.

Tourists enrolled in this study were interviewed on the aspects of littering. All 18 (100%) tourists reported litter had effects on them, ranging from health issues such as breathing difficulties due to the foul smell, pollution and destruction of nature, demotivation at the sight of litter and, discomfort and a nasty feeling at the sight of litter. 14(77.8%) also pointed out that they perceived a city was uncared for when it is littered. As documented by Rinkesh's "20 Astonishing Facts about Litter" (Conserve Energy Future, 2017), litter doesn't look nice often, has deleterious side effects on individuals and tourists are no exceptions.

Information captured from tourists was equally split on the effect of littering on return visits. One-half of tourists stated that litter discouraged them from visiting again while the other half disagreed with this opinion. This is similar to reports by the JB Green Team (2016) that stipulates that people wouldn't want to revisit places that are littered owing to litter-associated health consequences. Also, Rinkesh (2017) and Kingdom (2016), hold that litter has a negative impact on tourism.

Gauging the pattern of tourism, 100% of respondents felt it had changed over the years. 54% of respondents felt the number of tourists who visit Limbe has increased while 46% insisted the numbers have dropped. However, the response of the respondent indicate that the football tournament hosted by Cameroon between 19 November and 3 December 2016 (African Championship Women 2016) had a significant impact on the tourism pattern (En.wikipedia.org, 2017). Thus, there is a probability that the tourism pattern might change (decrease) after the football tournament.

## 7 Conclusion

During this research process, responses were obtained from tourists, locals and government officials and can be considered extremely successful. Respondents provided clear, concise and reliable answers regarding the three different kinds of impacts of littering on tourism, that were the main focus of the research. Respondents were interested and enthusiastic to provide all the possible information by knowing that, in future, changes as well as improvements can be possible.

Bad waste disposal has a significant impact on human health, animals, motorways and costs lots of money for the community to organize successful cleanup campaigns. Creating awareness of the imminent danger that litter poses to the environment is a step, to begin with.

To tackle the problem of littering in the Limbe municipality, South West Region of Cameroon, many recommendations were put forth by participants. They urged that government invest more in the waste sector by increasing incentives for clean-up campaigns, creating litter burning buildings, employing more people, placing law enforcement officers to catch defaulters and levy fines, an organization of prize award clean-up competitions, etc. Thus, by implementing these recommended solutions, litter in the Limbe municipality will be a thing of the past and the local government, indigenes and, tourist communities will be benefited. It is, therefore, vital for the government to collaborate as aforementioned in an effort to effect all positive changes

However, this research provides baseline information on the effects of littering on tourism in this part of the country. It could also be used as a foundation for future studies in other cities and regions of Cameroon since it is obvious littering is a widespread phenomenon. But this research was not without limitations; one of which was the difficulty in acquiring specific literature on this topic especially concerning the study area. Another limitation was the non-compliance of some locals, tourists, and even government officials. Transportation around the five study sites was a problem as well, and owing to uncontrollable circumstances such as traffic jams and congestion, prospective participants were lost. All these factors affected the results, as a smaller proportion of the actual sample population was enrolled in this study.

As a general recommendation, the ideas, concepts, and findings realized in this study should be used in future studies but with slight modifications. Better techniques on how to



get most of the locals, tourists and government officials should be employed, more volunteers should be involved so as to ensure enrolment of a good number of respondents.

## **7.1 Suggestions for the future**

In light of this study, my suggestion for the nearest future is to encourage the government or municipalities in Cameroon (Limbe) to link tourism with other economic sectors. If tourism is integrated into national development plans with adequate provisions for inter-sectoral linkages, it would contribute to the growth of all tourism-related activities or services in all the major economic sectors such as agriculture, fishing, forestry, transportation, and communication. Tourism offers opportunities for economic diversification. Tourism has become the major contributor to the gross domestic product in Limbe. Thus, the development of this sector will encourage tourists to visit, revisit, and will offer lots of opportunities to many people and attract more tourists all year round.

Furthermore, the state, municipalities, and investors in Limbe should work closely together to build bridges and roads to facilitate movement to and from the various tourists' locations, construct good restaurants, hotels which reflect the culture of the environment to attract and accommodates tourist at affordable prices. Thus, the existence of these facilities would create jobs and facilitate movement around the beautiful landscape of Limbe.

Moreover, the establishment of a good communication network that will globalize all potential activities or services in Cameroon. This would give tourists access to lots of information about their chosen location.

More so, an Environmental Management System such as the International Organization for Standardization (ISO) should be available in touristic areas in Cameroon to continuously improve environmental performance. This will minimize the environmental risk that may result from the increasing activities or services in and around the touristic environment. Tourists are attracted more to safe environments.

More still, everyone should be involved in the process of sustainable development of their communities. With this, a long-term sustainable development would be achieved or guaranteed. This will attract more tourists and investors to the environment.

Nevertheless, wildlife should be preserved to prevent some typical species from extinction. Tourists love animals and are attracted to an environment where wildlife is preserved.

In addition, the government or municipal councils in Cameroon (Limbe) should set up nursery and elementary educational programs on littering in schools to educate children who are the future. This will easily create awareness of the imminent danger that litter poses to human health and the environment in many homes through these kids. Children don't stay quiet when they see their parents or someone doing something contrary to what they are thought in school. Kids always want to tell their parents what they learn in school or correct their parents when they think what they are doing is not in accordance to what the teacher told them at school. I think this would improve littering habits in the future.

Also, I suggest the government or municipalities in Cameroon should set up vocational education on littering to create awareness on the aspects of littering. In the course of my studies, it was sad to see people who have no understanding of what littering is all about and the effects it has on their health and the environment.

The municipal councils in Limbe or Cameroon should allocate trash bins after every 50 meters in the city, educate people to dispose of their waste appropriately, make laws and impose fines on defaulters.

Finally, municipalities should create sanitary police and a commission to make sure littering situation is managed sustainably.

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