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Sustainability Appraisement: Controversy over the Enforcement of the Single-use Plastic Ban Amid the COVID-19 Pandemic in Yaounde - Cameroon

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ABSTRACT
Single-use plastics (SuP) also known as throw away plastics are intended to be used only once then discarded. They are widely used and increasingly in the market sector. Industries and shop retailers use them for packaging. They have become almost indispensable in most of our daily activities. Studies have revealed that poor waste management practices such as land filling and incineration pollute the environment. This has led nations to address the issue to curb environmental pollution caused by SuPs. Therefore, this study is aimed at investigating the controversy over the enforcement of the single-use plastic ban amidthe pandemic and pointing out the limits of the policies in this area. To this effect, many countries including Cameroon opted to place a ban on the manufacturing, trading, and the use of SuPs shopping bags that are below 61 microns. Since the ban, sensitization has been to encourage a change of behaviour from using SuPs and instead encouraging the use and reuse of the thicker polybags. We made use of qualitative and quantitative designs with interviews, direct observation and the questionnaires as research techniques. Our research tools were ; an interview guide, observation guide, questionnaires, pens, notebook, and a voice recorder. We were able to obtain the following results. It was revealed that with the advent of the COVID-19 Pandemic, coronavirus is easily spread through the contact with contaminated objects. Today, the tendency is to encourage the reuse of SuP as an ideal waste management practice. By so doing, this will therefore encourage the risk of contamination as plastics that are widely used for packaging may easily become vectors.

Keywords: *Single-use plastics, Sustainability, Waste management, plastic regulation, COVID-19 Pandemic.*

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INTRODUCTION

Single-use plastic bottles made from PETS (Polyethylene Terephthalate) are an essential part of our society because they are light and are easy to carry. They are known to be portable, strong, plentiful in size and shape, inexpensive, and easy to obtain [1]. The most common single-use plastics found in the environment in order of magnitude are; cigarette butts, plastic drinking bottles, plastic bottle caps, food wrappers, plastic grocery bags, plastic lids, straws and stirrers, other types of plastic bags, and foam take-away containers[2]. These are the waste products of a throwaway culture that treats plastic as a disposable material rather than a valuable resource to be harnessed[2]. Due to plastic's durability as packaging for food and beverages and its relatively low cost, its production has increased in line with its consumption [1]. PETs are polymers widely used in the manufacturing of SuPs. This type of plastic is recommended for single-use due to the risk of bacterial growth it poses if reused [3]. Much of the reasons behind dissuading persons from using SuPs are environmental and very little is said about the health risk. Plastics contamination occurs through degradation and the chemical leaching and fragmentation of macro plastic into micro plastic because components like bisphenol A (BPA), phthalates and brominated flame retardants pose health risks for humans [1]. This form of plastic contamination was hitherto the most recognised form until the outbreak of the COVID-19 pandemic known to spread as a result of any contact with a contaminated object.

With the advent of the unprecedented pandemic, many changes have been carried out to avert or curb the spread of this deadly disease. Behaviours had to be modified in order to adapt to the current trend. Since its outbreak, the Coronavirus has been a major global health concern. As of February 1st 2022, the total of declared contaminated cases worldwide is 379, 223, 560,the dead toll is 5,693,245 and 299, 306, 604 of recovered cases (https://www.worldometers.info/coronavirus/). The dynamics and evolution of the diseasevary widely from one context to another, with developed nations recording the highest death toll [4]. Many studies reveal that this part of the world is the least affected.Africa as a whole is a continent where the COVID-19 Pandemic has been less devastating as compared

to other continents especially North America, Asia and Europe. The mitigating reasons that account for this difference on the African continent can be buttressed by some speculated reasons among these are; under-reporting of cases, early effective lockdown measures, young age of the population, previous exposure to other coronaviruses, a strong immune system because of frequent exposure to pathogens, and geographical and/or genetic factors contributed tomitigating the health impacts of COVID-19 in Africa [4]. They further give credit to the role of traditional medicineand particularly the African medicinal plants in limiting COVID-19 transmission on the Continent, Cameroon inclusive. Though further research still needs to be carried out in this area, they added.

Mitigating the spread of the pandemic was given pride of place to health care experts and the authorities in charge of public health. Sensitization campaigns in different media platforms shared information on different practices that should be adopted in a bid to reduce risks of contamination. Limiting or simply avoiding contacts with infected or suspected persons or objects remains an effective means to curb the spread of the pandemic. For this reason, the WHO and the Government of Cameroon have prescribed barrier measures to curb the spread of the coronavirus that underscores washing of hands regularly with soap and running water as a means to mitigate contamination, social distancing of at least one metre, putting on face masks and sneezing at the elbow as some measures to fight against the propagation of the pandemic.Washing of hands regularly intends to get rid of the virus on our hands that regularly comes in contact with many objects that may have been contaminated. Among these objects are SuP that we often use. Recently, studies have shown that the coronavirus live for three to seven days on nonporous surfaces such as glass, stainless steel and plastics depending on the material and environmental factors[1]. According to this same study, infection is possible when a contaminated particle reaches the mucous membranes; the eyes, the nose or the inside of the mouth. Therefore, one has to be cautious by avoiding to touch the face.The SARS-Cov-2 has a mean incubation period of 5.8 days [4].

The incubation period of the SARS-Cov-2 is long enough to stand as a potential risk of contamination especially when dealing with our lifestyle and the manipulation of objects. Single-use plastics are very useful and are been manipulated most often. They are among the most consumed products worldwide. It is estimated that between one to five trillion plastic bags are consumed worldwide each year [2]. This represents a consumption of about ten million plastic bags every minute. Owing to the fact that packaging is mostly single-use, especially in business-to-consumer applications[2], they can be considered as a vector of the Coronavirus. Adding to the fact that we mostly use them to carry our goods and foods stuff, exchanging packaged goods from one person to another, and from one place to another. The Coronavirus statistics pertaining to Cameroon stands at 116.718 contaminated cases, 1.880 of death cases, and 106.050 recovered cases as of February 1st 2022 (https://www.worldometers.info/coronavirus/).

METHODOLOGY

The social science standard protocols were followed which consisted in identifying the study population, building a sample frame and creating data collection tools. Interview guides, observation guides and questionnaires were prepared and used. These tools were used in different SuP waste production sites. Data for this study was collected through qualitative and quantitative research methods. Semi-structured and in-depth interviews and observations are the research techniques used for the former and the administration of questionnaires for the latter and a review of current literature.An initial work started in March2019 with the aim to test data collection tools. Later, the survey started on March 12, 2020 and ended on July 28, 2020. A total of 325 respondents in the seven Sub-divisions that make up the Mfoundi Division took part in the questionnaires survey. This was to get an overview of SuP waste management practices in Yaounde amidst the pandemic. They were persons of different age groups and socio-economic background.The aim of the questionnaire was to obtain quantitative data on the different SuP waste management strategies especially the reuse of these plastics.

Sampling, Sample frame and sample size

The target population in this study is the Yaounde population, which comprises of the inhabitants of the Yaounde1, 2, 3, 4, 5, 6 and 7 sub-divisions. The sample frame was drawn from single-use plastic users in households, working places, markets, and the streets forming one case, the other case involved waste collection agencies and the other was plastic manufacturers who recycle plastic waste. Non-probability sampling methods were used in this study namely; quota sampling and convenience sampling. A sample frame considered a total of three hundred and twenty participants. A larger sample size would have been too expensive and taken more time We considered this number representative of the total population of Yaounde. The convenient sampling techniques were used for the Civil Administrators interviewed and waste pickers, plastic manufacturers, NGOs, and Civil Society actors to promote sustainable agricultural practices.

Sample size was broken down according to the inhabitants of the seven sub-divisions to 320 participants. The quota sampling was drawn from the predetermined population size of each sub-division. The most populated being Yaounde 4

[1]www.roswellpark.org

and the least populated Yaounde 7.They were those recruited for the purpose of statistical analysis accordingly as presented in the table below.

Data collection tools

Qualitative research turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and memos to the self [5]. Achieving these requires the use of specific research tools to collect data. In this study, three different interview guides were used on different target groups namely; the administrative officials concerned with urban waste management, the various actors involved in plastic waste management, plastic bags commercial agents and research participants in households and public places.

Questionnaires were also administered to these categories of participants with pre-coded questions, letting the participants to tick the appropriate answers. Provision for open subsidiary questions have also been made possible in other to get the participants opinion on a specific subject. Quantitative data obtained in this study was possible through the administration of questionnaires.

Data was collected simultaneously using a camera. The camera was used to collect visual data to illustrate waste management practices. Document analysis through literature review permitted us to enrich existing data and shaping the study to focus on unexplored areas in waste management. To this regard, books, articles and other forms of publications were consulted on the internet, and legal texts organizing the waste management sector were not left out.

An audio recorder was used during the fieldwork in interviewing research participants and key participants as well. Interviews permitted us to gather data related to the representations of single-use plastics, their knowledge on the existence of other alternatives to light polythene bags and the impact these plastics have on the environment. The opinions of the participants on the various roles played by the different actors in waste management, on the ban and the non-effectiveness of the ban on the field, and their suggestions to environmental protection were also recorded. Bloc-notes and pens were used to write down information that could be forgotten. They were also used in certain cases where the informant refused to be recorded for discretion. Key points and pertinent facts were noted in a short time instead of a recorder that may take some time to turn on.

Data collection procedures

The implementation of ethics in the course of this study enabled us to inform the administrative authorities in charge of the seven Sub-divisions of Yaounde of our presence in their respective areas of competence for the purpose of carrying out academic research on plastic waste management. The main researcher of this study aided by a gatekeeper conducted fieldwork in the seven sub-divisions. The presence of the gatekeeper who was a semi-retailer and has been trading plastics for almost a decade was necessary to get insights in the contraband trafficking of banned polybags.

Data collection strategy required the main researcher to visit households, work places, markets and other public places to observe behaviours and practices related to single-use plastics, and carry out interviews depending on the opportunities favourable to carry out such. Therefore, once the main researcher got into a public place or household, he requested to meet the head of place or the person in charge to notify his presence and the objectives of the study.

Once the authorization was granted, an informed consent form was given to the research participant to accept or refuse participating in the study without any form of constrain or deception. They were allowed to wittingly be enrolled and participate in the study. They were reminded that they were not obliged to answer every question and were free to withdraw from participating at any time. Identification information concerning the research participant was noted and they were assured of their confidentiality in the management of their identity and their information by the researchers. The number of questionnaires allocated to each sub-division was respected as presented in the table above.

In houses and public places where new waste management practices were identified, photos were taken. A good example was noted in the house where a housewife demonstrated how she uses plastics to kindle flames use for cooking. Photos were also taken to present the places in households where waste is temporally kept, and on the dumpsite, photos showing different practices taking place like those responsible for throwing waste, waste segregation, waste picking or collection by waste pickers or scavengers.

The role of the gatekeeper was mainly to allow us have access to plastic bags merchants. The plastic merchants especially the wholesalers were very discreet because they admitted being aware of the repression moves frequently organized by the authorities. They are the highest investors in the contraband trading and equally the greatest losers if they are caught. Semi-wholesalers, retailers and other traders who use the banned plastics for packaging carry out their activities in a very discreet manner. Approaching them for interviews was not possible except with the presence of the gatekeeper who reassured them.

Information from secondary sources

Literature on plastics-related themes and cultural ecology were consulted to describe the single-use plastic waste management system in Yaounde. In this like, published books, peer-reviewed articles, thesis and dissertations, and magazines were considered in this study. The internet was also resourceful in providing insight into this study. Lots of consultation and research was done on the internet. To this effect, libraries were consulted, and books with similar themes related to this study were reviewed.

Data Analysis

After fieldwork, data analysis consisted in verification, coding, data entry and tabulation. The tables were exported to MS excel 2013 to produce graphs. The data analysis considered giving importance to careful sampling and strict categorization and coding to achieve objectivity, reliability, generalizability, and theories development [6]. Qualitative data analysis was done in the following manner. Interviews that were recorded were transcribed manually. The units of analysis were selected, which aspects or themes were obtained from the transcribed text. These aspects or themes are content retrieved from the recordings in the form of a coding schedule. A description and the codes were numbered that represented the measure of the units of analysis in the form of a coding manual. The codes or codded fragments were manually retrieved, words in native dialects were equally transcribed before being translated to determine the representations.

Next, classification was done by regrouping the units that were similar then combined or put together. A coding schedule in the form of a table was set up, with each column being headed by a unit of analysis used to investigate each case. They are broken down to establish codes that can be produced that list descriptions or measurements in numbered codes.

Quantitative data was also analyzed using the SPSS software version 19. A data dictionary was created where variables and the data were entered andanalyzed then later, they were exported to MS excel 2013 for graph creation. The variable from the questionnaires were entered. Data interpretation was based upon field data; photos, graphs and interviews through paradigms in the theoretical framework.

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

Plastic policy in Cameroon

The legal system in Cameroon places the constitution at the top of the hierarchy of norms, subject only to international treaties, laws and conventions ratified by the country.Cameroon has rarified many international treaties including that of the United Nations Sustainable Development Goals. Like every other member, the country has the moral obligation to respect and implement the resolutions. The Constitution was amended to align with these international obligations.An extract of the preamble of the 2008 Constitution states that;

> "*Every person shall have a right to a healthy environment. The protection of the environment shall be the duty of every citizen. The state shall ensure the protection and improvement of the environment."*

The Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED) of Cameroon is the Government department that is in charge of matters related to the protection of the Environment. This was the new configuration set up from the former Ministry of Environment adapted to suit the requirements of the afore-mentioned international obligations. The MINEPDED has elaborated a legal framework to enhance sustainable waste management. Three laws taking into consideration waste management actions and the responsibilities and obligations of plastic production firms and industries. They are;

- Decree No. 2012/2809/PM of 26 September 2012, Fixing the sorting, collection, transport, recovery, recycling, and final treatment of waste;
- Order No.001/MINEPDED of 15 October 2012 , Fixing conditions of obtaining an Environmental Licence as regards the management of waste;
- Joint Order No. 004/MINEPDED/MINCOMMERCE of 24 October 2012, to fix the regulation of the importation and the marketing of biodegradable plastics. These texts underscoredthe responsibility for the producer to manage post-consumption of its plastic packaging; it is with-statement those generated by the final consumer of their products put on the market.

Single-use plastics ban in Cameroon

Within this context, the MINEPDED prescribed as mandatory to all manufacturers of plastic bags or plastics used for packaging. Any manufacturer henceforth upon the release of this order must be conformed to the rules and regulations. The conditions to obtain an Environmental Licence to be a legal operator in the sector require the fulfilment of specific engagements and conditions. The first presents a waste management plan of the generated waste and the mechanisms of monitoring the implementation relating to it. The 2016 UNEP report classifies Cameroon as one of the countries that have introduced regulations on plastic bags. The ban was passed in 2006 and only entered into force in 2014, thus eight years later. It specifies the ban solely on non-biodegradable plastic bags of less than 61 microns. The report also mentioned the impact of the ban upon the writing of the report.This studyshowed that very little reinforcement instruments like educating the population through campaigns or the media did not yield many fruits. Many respondents in our survey had never heard of any ban on the light polybags talk less of substitution alternatives. This alone accounts for the failure in the effective implementation of the ban witnessed throughout the country and in Yaounde in particular. They continue to use SuPsas was the case before the ban.

To dissuade the use of Single-use plastics and promote thicker plastics, the Government imposed the production of plastic bags with >61µ. This change of quality in the production of plastics in Cameroon resulted ineluctably to the rise of prices of these bags. With the increase of prices in plastics products with the higher quality, they aimed at reaching certain objectives. The first was to make people adapt to the new products as these plastics have been proposed as substitutes to the banned plastic bags. Another objective was to reduce plastic pollution by encouraging plastic reuse. Thicker plastics are more likely to be reused than the lighter polybags. The more polybag reuse is encouraged, the more the contamination risk among the population.

Erstwhile, most business used the very light polybags that were sold at very cheap prices. This packaging was free. Customers just needed to buy a product and they will have their goods packaged free of charge. Levying charges on polybags through the new regulation in force has proven to be an effective means to discourage single-use plastics. There is extensive evidence of a significant reducing effect of this measure on plastic bag consumption and a positive effect on the use of reusable bags [7,8,9]. Shops and businesses who have complied with this law in force have started trading authorised polybags of >61µ. Not only are these polybags sold but they have been noted to be expensive, the minimum price of a conformed polybag is 100 F CFA. Disbursing money just for packaging is still new to the middle- and low-class Cameroonian. The resistance of many to disburse money for packaging has frustrated many businesses. Some refuse to buy any product under such conditions. As a means to resolve this situation, many unfortunately have opted to go to the former use of banned polybags or change the behaviour of start reusing plastics.

Government response strategy to the Coronavirus pandemic (COVID-19)

The alarming wide spreading and the sky rocketing dead tolls registered worldwide, the Government of Cameroon opted to elaborate and implement a protocol to curb the spread of the Pandemic. This protocol took effect as from Wednesday 18 March 2020 and some measures are still in force at the moment of the publication of this article. There are thirteen (13) measures in total. We shall rely only on the 13th measurebecause it is directly concerned with this study. It states that; “The public is urged to strictly observe the hygiene measures recommended by the world Health Organization, including the regular hand washing with soap, avoiding close contact such as shaking hands or hugging, and covering the mouth when sneezing” (spm.gov.cm).

Thereafter, a COVID-19 task force was formed, andinternational borders were closed for incoming passengers by 18 March 2020. Under theleadership of the Prime Minister, several preventive measures were instituted nationally tocontain the local COVID-19 outbreak [4].

Sustainability appraisement

This study revealed that in Cameroon, despite the ban in 2012 that was finally implemented in 2014, the demand and use of these SuPs is still in the rise. The ban has however mitigated the manufacturing of these plastics locally but contraband continues to fuel them into the country from neighbouring countries. The most used are the light transparent and black polythene bags and the SuP bottles used for packaging beverages and mineral water.Some respondents argued that the move by the government to ban these plastics makes no sense because they have more pressing environmental concerns than placing a ban on plastic bags. Others added, there are other social, political and economic issues plaguing the country. Some stated the high rate of unemployment, the wandering of jobless graduates, the high rate of criminality in some neighborhoods, high taxes crawling petit businesses, the high price of some basic commodities.

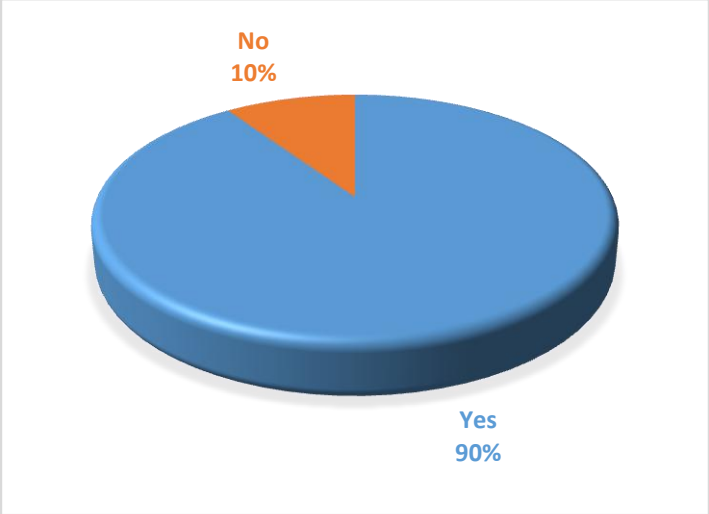

Figure 1: Awareness of plastic ban:

From the interviews conducted 90.45% of the interviewees claimed that they are aware of the ban and 9.54% indicated that they are not aware. This indicates that so far, the authorities have at least succeeded in their communication strategy to let the masses know about the ban. On the contrary, the results on the field paint a very controversial picture. This survey shows that a greater portion of the population that are aware of the ban are exposed to yielding to government's implantation plan to encourage the reuse of SuPs.

A Dithering Population to a change in behaviour

After the publication of the ban placed on light polybags, we attempted to find out from the Yaounde city dwellers if they were in support or they opposed the ban on plastic bags been used and sold in markets, supermarkets, stores etc. 66% were in favour of the ban and 34% opposed the ban. However, a week later, when another study was conducted with the same respondents, the support for a plastic ban appeared to be less absolute when residents were presented with specific ways these bags could be reused, revalorized and recycled. Several options were again proposed to them. 23% maintained their position and still wanted a complete ban, 34% preferred that stores should continue to give away plastics for free, 30% encouraged other alternatives. 7% of the research participants accepted that a small fee should be paid by customers and finally, 6% replied that they didn't know.

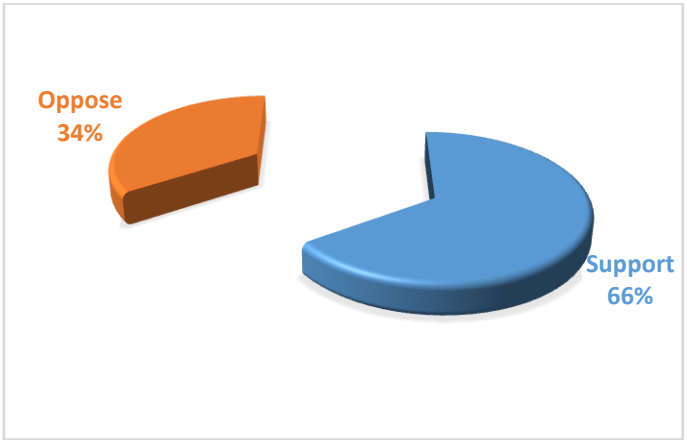

Figure 2: Support in favour of the plastic ban

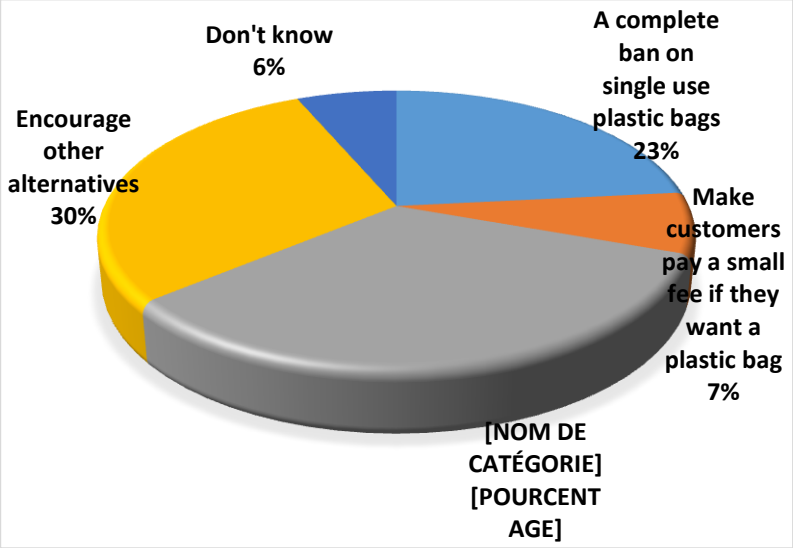

Figure 3: Opinions onthe ban

"This is one of the problems with gauging opinion on an issue the public has not given a lot of thought. The ultimate goal may seem worthy at first, but support wanes a bit when people consider how it might affect them in its implementation," said Patrick Murray.[2]

To develop Patrick Murray's point further, the decision to completely bid farewell to single used plastics or keeping them and reusing them despite the prevailing contamination risk amongthe Yaounde population remains a very complex issue. This is due to their appreciation on the veracity of the much talk about threats and widespread of the COVID-19 pandemic. Some expressed their skepticism and admitted that the pandemic is a fabrication of the Western countries. They really doubt about the existence of a ravaging virus that is spread by airborne means.

Many users claimed that they have not been able to find a corresponding substitute to the highly appreciated light plastics. Traders and some other users argued that even though the government gave them a one-year period of grace to do away with the old habit of using the light banned plastics and their changing behavioursto a new mode of life by reusing SuPs, they still need much time for the uneasy transition. "People have been using plastics for many years and they cannot be asked to stop using them, just like that" argued an interviewee. Another added, "What are we going to use to wrap the things of the customers?" The change of behavior and adaptation takes time.

Reusing and Recycling Used Plastics

According to the World Bank pollution prevention and abatement handbook glossary, the term recycles or reuse is used interchangeably and defined as the process of minimizing the generation of waste by recovering usable products that might otherwise become wastes. Examples are the recycling of aluminium cans, waste paper, and bottles. Additionally, UNEP [2] considers recycling operations that involve the processing of waste into products, materials or substances, though not necessarily for the original purpose. An example is seen when lubricating oil refined which could result in high-grade oil, which is valuable for its chemical properties, and hence that would be a recycling operation. Once this process or operation is complete, the substance or object in this case plastic bottles or bags is no longer waste.

[2]Director of the independent Monmouth University Polling Institute.

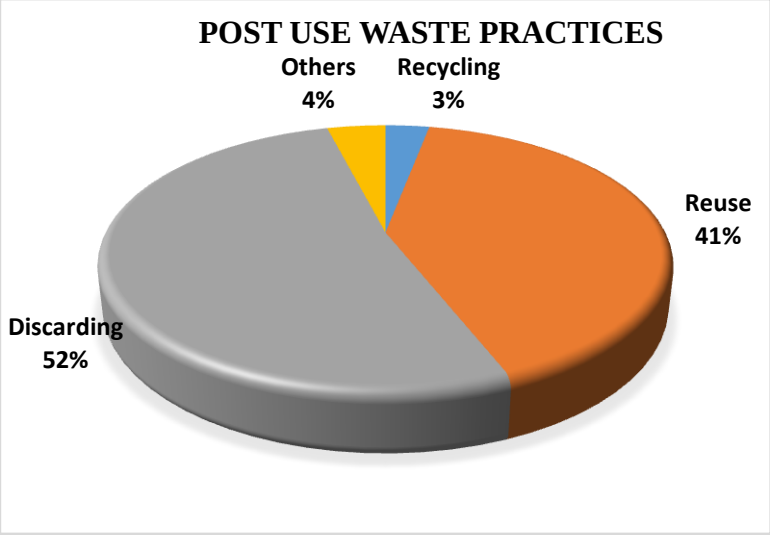

Figure 4: Post use waste practices

The post used practices represented in figure 4reveals an uneasy situation. Despite the risks of being contaminated, the habits of using the same plastics over and over exposes the users. Respondents stated that, using the same plastic bags during shopping time and again was more economical than buying new ones each time they had to shop. 41% of the research participants have maintained the behaviour they had before the outbreak of the pandemic. If we must consider that the coronavirus can live for up to three days on a plastic surface, then plastic reuse is definitely not a better option. Using these plastics and disposing them immediately after use offers a more safety option.

Implementation of the AntiCovid-19 barrier measures

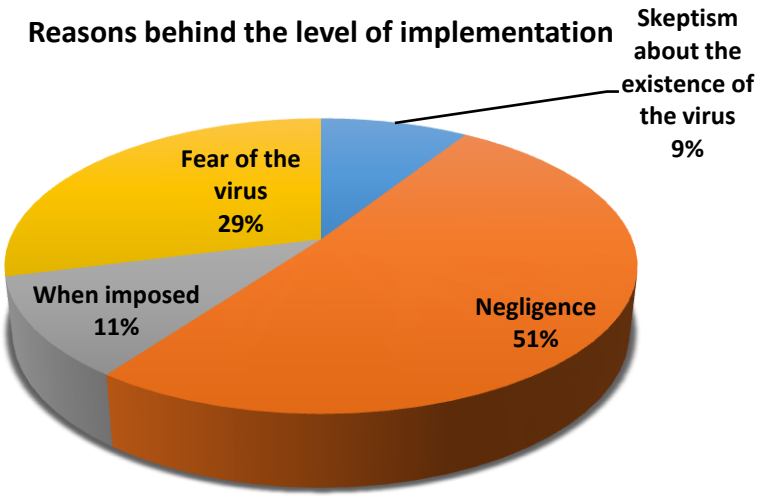

Figure 5: Reasons behind the level of implementation of Anti-Covid 19 barrier measure

A survey shows a lackadaisical and a low level in the implementation of these barrier measures. The causes of this drop are caused by many reasons. Respondents expressed a lot of scepticism in the existence of the virus. 51% of the respondents admitted they are negligent, 29% said they implemented the barrier measures out of fear, 11% said, they implemented the barrier measures only when they were forced to do so and 9% admitted they were sceptical about the existence of the Covid-19 virus reason why they do not take the barrier measures seriously. It is evident that relying on the implementation of barrier measures to combat the spread of the virus is not really effective.

PERSPECTIVES

Discouraging the use of reusable plastics amid the COVID-19 pandemic

COVID-19 is a pandemic that is unprecedented of is kind and this paves the way for new studies in building ideas on how to cope amidst such a pandemic. The Government of Cameroon because of the aforementioned reasons to subsidize the manufacturing of biodegradable plastics has opted for the encouragement of reusable plastics bags. To achieve this

option, they imposed the production of thicker plastics by manufacturers. The law and regulations about this option have remained unchanged since the outbreak of the pandemic.

A survey conducted in some households in Yaounde where 325 persons were interviewed on their reuse behaviours of Single-use plastics revealed that the habit of plastic re-use is still very much among the Yaounde city dwellers amidst the COVID-19 pandemic. Plastic re-use habits can be a risk factor if an infected person comes in contact with plastics. The coronavirus can live for up to 3 to 7 days on plastic surfaces.

The Plastic pandemic

Disposable plastics or "throwaway" plastics will be a better option amidst the pandemic. Legislation on the ban of light plastics may be suspended and rather encouraged during this period. A good example is found in some parts of the USA where the legislation restricting disposable bags was uplifted. Many food vendors and grocery stores have completely embraced these hitherto banned plastic bags, plates and cutlery. Grocery stores have sharply increased plastic bag usage [10].

In addition to sanitizing procedures, many businesses decided to temporarily suspend the use of reusable plastic bags, bottles, etc in care of their customers and partners. This revealed an interesting step taken to limit the spread of the coronavirus. By late June, cities and states had temporarily suspended almost 50 single-use item reduction policies across the U.S. – mainly bans plastic bag bans. The pandemic also spurred demand for single-use personal protective equipment, such as masks and plastic gloves. These items soon began appearing in municipal solid waste streams and discarded on streets [10].

The Government should take action to limit a person to person contact thereby reducing the transmission of coronavirus. Special restrictions strategies and efforts should be applied to protect the highly vulnerable population such as children, health care workers, and older aged people. The major death cases of coronavirus outbreak are happening mainly in old people probably because of a poor immune system that allows rapid growth of viral infections [11].

CONCLUSION

Before the outbreak of the COVID-19 pandemic, the Government's plastic waste pollution reduction strategy was mainly focused on encouraging plastic reuse. Lighter plastics were banned and the manufacturers were obliged to produce thicker plastics thereby encouraging reuse. The outbreak of the COVID-19 and its fast propagation has led to a series of measures imposed the Government to reduce the propagation of the pandemic. Among these measures are precautions by respecting social distancing. The reason being that, the risk of contamination is higher if one gets into contact with an infected person or a contaminated object.

Adopting reuse of plastics as a waste management strategy amid the COVID-19 pandemic contributes to the spread of the pandemic especially in a context whereby, there is a drop in the implementation of barrier measures to curb the spread of the virus. Washing of hands which is amongst the practices imposed by the Government's protocol to combat the spread of the virus and uplifted by some scientists as an efficient strategy to limit its spread by enhancing hygienic practices, would have been given credits as they all both encourage plastic reuse. Unfortunately, negligence and scepticism account for the non-respect of this anticovid-19 barrier measure, hence encouraging plastic reuse in such a context exposes the population to contamination by the virus.

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