

Assessment of Plastics Reduction Strategies in the Kenyan hospitality Industry in Post Covid -19 Era

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1.0 Introduction

Plastics are materials consisting of synthetic or semi-synthetic organics commonly made from petrochemicals. Since they are relatively low cost, impervious to water, and versatile, plastic products are widely used in virtually all departments of the hospitality industry. However, plastic pollution emanating from their use has negative impacts that has lead to alterations of habitats, natural processes, and life support systems, thereby reducing the various ecosystems' ability to adapt to climate change. This has directly affected millions of people's sustainable livelihoods, food security capabilities, and social-economic well-being.

The discussion on the effect of plastic on planet Earth has been ongoing and there is no doubt that the management of plastics effects on the environment should be a priority in every sector (Aragaw, & Mekonnen, 2021; de Sousa, 2021 and Bucci, et al., 2020). This may have informed the choice of the 2023 World Environment Day theme: *Solutions to plastics pollution*.

The studies by Mejjad, et al., 2023; Maione, 2021 and Camilleri-Fenech , et al., (2020) confirmed that the tourism and hospitality industry is a major consumer and generator of plastics right from the front office, guest's rooms, and kitchen and conference area. In Kenya just like many other tourist destinations, there have been campaigns on plastics reduction and management and previous studies show that many establishments have adopted some plastics management policies while others as still struggling (Behuria, 2021).

This study intends to document the success of plastics reductions in the accommodation sectors in Kenya and share the findings with the body of knowledge. As the visitors get educated about their plastic footprint, most of them have adopted the responsible traveler's code of ethics while others have adopted the eco-tourism principles putting more pressure on service providers to reduce plastics used. A term like "no plastics conference" is now common in the tourism industry. This study aimed to assess the extent to which accommodation facilities in Kenya have managed to reduce plastic usage in the front office, dining areas, rooms, and conference facilities post the COVID-19 era. It also sought to investigate plastics management measures adopted by the industry.

2.0 Literature Review

2.1 Plastics management in the tourism and hospitality industry

Plastic management in the tourism and hospitality industry has become an increasingly important topic due to the environmental impacts of plastic waste. Many organizations and businesses in the hospitality industry are adopting measures to reduce plastic consumption and promote sustainability. The study by Martin-Rios, et al., 2022 noted that despite the hospitality industry players having various strategies to minimize plastic waste, only a handful are implementing them. Schnurret, et al., 2018 and Okumus, et al., (2020) found that some accommodation facilities have already phased out single-use plastics like straws, plastic bags, water bottles, and disposable cutlery, encouraging and adopting the use of biodegradable or compostable packaging materials instead of the conventional plastics. They are providing guests with refillable water stations and reusable containers for toiletries instead of single-use bottles, in addition to other environmental purchasing practices like bulk purchasing.

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According to Van Resburget, et al., (2020) raising awareness among staff, guests, and the local community about the environmental impact of plastic pollution has been observed to change their behavior and make them more responsible for plastic usage. Vanapalli, et al., (2021) and Marazzi, (2021) also noted that persuading suppliers to adopt sustainable packaging practices and provide plastic-free alternatives helped reduce the amount of plastic entering the business.

This study noted that many hospitality businesses at Kenyan coast have implemented plastic reduction strategies but still are facing challenges such as operational limitations, lack of consumer awareness, and resistance from suppliers. Van Rensburg, et al., (2020), Adam, et al., (2020), and Almeshal, et al., (2020) observed that these challenges may be among many other factors that have slowed the uptake and implementation of plastics reduction policies. Nevertheless, successful case studies by Komen (2020), Reinert (2020), and Van Rensburg, et al., (2020) have shown that there are benefits in applying most plastic reduction initiatives.

2.2 Covid -19 effects on the gains made on plastic reduction

Despite a lot of efforts having been put in place to reduce plastic usage, the Covid-19 pandemic has had a significant impacts on single plastics use practices in the hospitality sector (De Sousa, 2020: Prata, et al., 2020, Silva, et al., 2020). While the industry has been actively working towards reducing plastic waste, the pandemic introduced new challenges and considerations related to health and safety. To comply with hygiene protocols and minimize potential transmission of the virus, many hospitality businesses, including hotels, restaurants, and cafes, have increased their use of single-use items. This led to a shift from buffet-style dining to individually packaged meals or pre-packaged takeout options, resulting in increased plastic packaging waste.

Studies by Elkhwesky, et al., (2022) and Zutshi, et al., (2022) have documented that prior to the pandemic, many businesses in the accommodation sector were implementing reusable practices, such as providing refillable water bottles, toiletry dispensers, and towel reuse programs. However, due to concerns over potential virus transmission, these initiatives were temporarily suspended, and single-use alternatives were re-introduced. The pandemic led to a heightened focus on packaging safety, with businesses and consumers prioritizing sealed and individually wrapped items, and other single-use plastics such as hand gloves in the food and beverage outlets. Ncube, et al.,(2021), Zutshi, et al.,(2022), and Elkhwesky, et al., (2022) in their studies found that these preferences for single-use packaging increased the use of plastic wraps, sealed containers, and disposable packaging materials, and hence the volume of plastic wastes.

On the positive side of the pandemic, the event and conference industry experienced a significant shift as gatherings and conferences were either canceled, postponed, or moved to virtual platforms. This resulted in a decline in catering services and an overall decrease in single-use plastics associated with large-scale events (Cristelet, al., 2020, Rwigema & Celestin, 2020). It is worth noting that while the pandemic has caused a temporary increase in single plastics use in the hospitality sector, many businesses remain committed to their long-term sustainability goals. Efforts are being made to balance health and safety requirements with environmental considerations, such as exploring eco-friendly packaging alternatives, improving recycling infrastructure, and reintroducing reusable practices in a safe manner as restrictions ease.

2.3 Plastics at the front office

Studies by different authors point out that plastic usage in the front office of hotels varies depending on the specific practices and policies of each establishment (Camilleri-Fenech, et al.,2020; Jarvis & Ortega, 2010 and Harvey, 2021). However, there are several areas where plastic usage is commonly observed in hotel front offices. Many hotels use plastic key cards as a convenient and reusable alternative to traditional metal keys (De Jager, 2021). Plastic packaging may be used for items like complimentary toiletries, stationery, and amenities provided to guests. Plastic sleeves are often used to protect and display key cards, providing a professional appearance and preventing damage. Plastic cups or disposable water bottles might be available for guests at the front desk or in the lobby area.

With increasing awareness of environmental issues, many hotels are taking steps to reduce their plastic usage and are adopting eco-friendly alternatives like biodegradable key cards, paper or digital brochures, refillable toiletry dispensers, and reusable cutlery. Some hotels have also implemented recycling programs to manage plastic waste more responsibly.

2.4 Plastics at the dining and food outlets

Lytvynenko, & Lytvynenko, (2021) found that plastic usage in dining and food outlets within hotels can have a significant impact on the environment. They also found that plastic cutlery, including spoons, forks, and knives, is frequently provided for convenience in quick-service or take-out settings. Also noted was straws and stirrers are commonly used for beverages, including cocktails and soft drinks.

Single-use plastic cups are prevalent for serving drinks, both hot and cold (Wong, 2022). Individual portions of condiments, sauces, butter, and other food items are often packaged in plastic. Bottled water or other beverages in plastic bottles may be sold or provided to guests.

Nevertheless, with increasing concerns about plastic waste and environmental sustainability, many hotels and food outlets are adopting measures to reduce plastic usage. Replacing disposable plastic cutlery with reusable alternatives like metal or bamboo utensils, glassware, and ceramic plates. Using biodegradable or compostable containers made from materials like paper, bagasse, or plant-based plastics for take-out meals. Installing water stations or providing filtered water dispensers to encourage guests to refill their own reusable water bottles instead of offering single-use plastic bottles. Offering condiments, sauces, and other food items in bulk dispensers or refillable containers rather than individual plastic packets. By adopting such measures, hotels and food outlets can minimize their plastic footprint, promote sustainability, and contribute to a cleaner environment.

2.5 Plastics at the conference areas

Plastic usage in conference areas of hotels can be quite significant due to the nature of events and the need for convenience. Plastic water bottles are frequently provided to conference attendees for hydration purposes. Plastic containers may be used for serving meals or snacks during conferences, as well as plastic wrap or packaging for individual food items. Plastic cups are commonly used for serving beverages during breaks or at water stations. Plastic name tags and badge holders are commonly used for identification purposes during conferences Kim, et al, (2020).

Plastic reduction in the hospitality industry can be effected by setting up proper waste management systems with designated recycling bins to ensure plastic waste is disposed of correctly. In addition offering eco-friendly promotional items like reusable tote bags, stainless steel water bottles, or bamboo products instead of single-use plastic items, and promoting the use of digital platforms for conference materials, agendas, and presentations, reducing the need for printed materials.

3.0 STUDY METHODOLOGY

The study adopted a descriptive design and combined both qualitative and quantitative methods. The study area comprised of Nairobi, Naivasha, and Nakuru areas which were conveniently selected as having a substantial number of accommodations ranging from 3 to 5-star ratings. Stratified sampling methods were used according to the locations of the accommodation. The target of the study was managers or supervisors but in cases where they were not accessible, human resource personnel would complete the questionnaire. A maximum of two questionnaires were given to respondents in any given accommodation.

Quantitative data was collected through questionnaires while qualitative data was collected through structured interviews. The test re-test method was used to examine the validity and reliability of data collection tools. Cronbach's alpha was used to measure the internal consistency of data collection tools and was found to be 0.785 and was considered adequate. Data were analyzed using SPSS version 2.6 and presented in the form of tables, bars, and graphs.

4.0 Data Findings and Discussion

4.1 Respondent's profile

A total of 134 people responded to the survey. The majority (70%) of these respondents were from city hotels as compared to game lodges (15%) and tented camps (11%). The majority (57%) held managerial positions, and supervisors (27%). The majority (43%) came from four-star establishments.

4.2 Adoption of Plastic Management Measures

The study sought to investigate plastics management methods applied by accommodations in Kenya (Figure 1). The majority (77%) of the respondents have a plastics reduction policy and 54% conduct annual waste audits in order to know the amount and category of waste they generate. More than 68% have adopted green procurement practices while the majority (72%) have also adopted them. The study noted that only 31% of respondents measured the amount of plastics they generate. Most of them (65%) are educating their suppliers on the effect of plastics on planet Earth and are involving them in sorting plastics upon arrival. Only 26% have the capacity of recycling or reusing some plastics while a minority of them (20%) sell plastic waste.

From the above findings, the study can deduce that some accommodation sectors in Kenya appreciate the need to manage plastics and are applying one or two strategies to reduce plastic usage. This is a positive development in the industry bearing in mind that the study took place in the year 2022, which falls into the post-Covid -19 era, which had reversed most achievements on plastics management strategies.

This study noted that many hospitality businesses more so at the Kenyan coast have implemented plastic reduction strategies but still are facing challenges such as operational limitations, lack of consumer awareness, and resistance from suppliers. Van Rensburg, et al., (2020), Adam, et al., (2020), and Almeshal, et al., (2020) also observed that these challenges may be among many other factors that have slowed the uptake and implementation of plastics reduction policies. Nevertheless, successful case studies by Komen (2020), Reinert (2020) and Van Rensburg, et al., (2020) have shown that there are benefits in applying most plastic reduction initiatives.

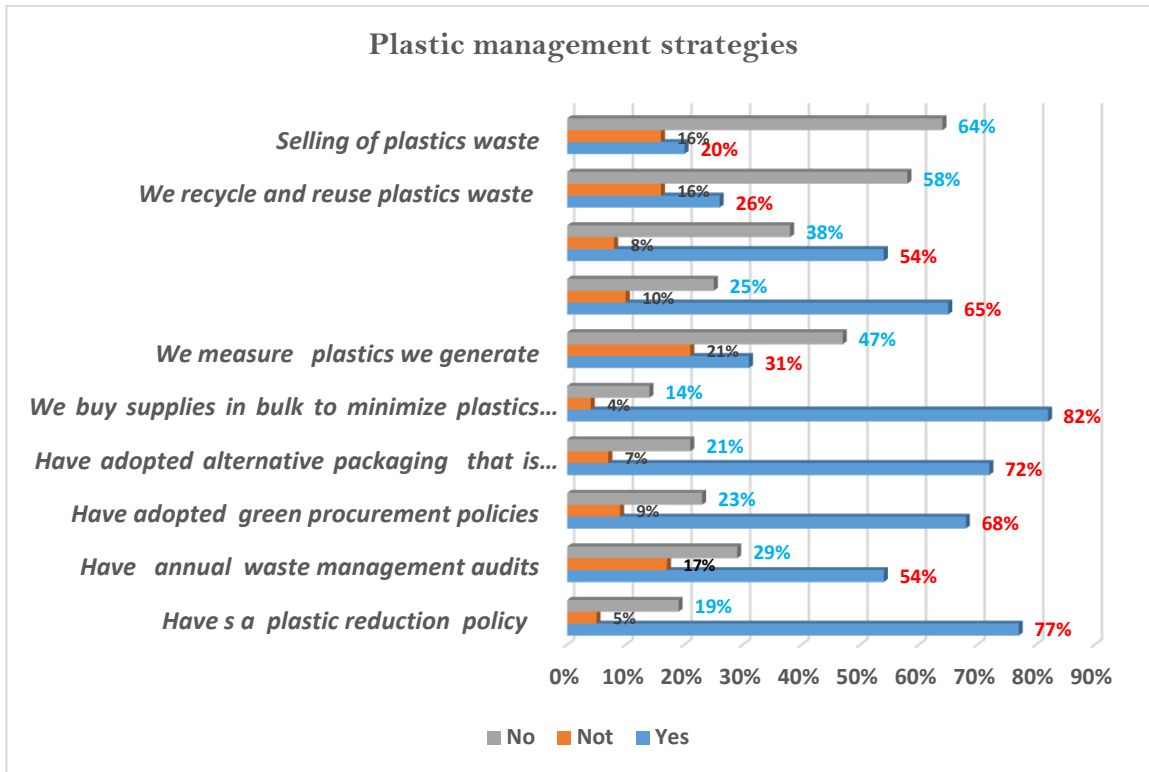


Figure1: Plastics management strategies in the hospitality industry

4.3 Adoption of Plastics Reduction Methods

The study found that only 43% of respondents have replaced plastic room keys with biodegradable and reusable room keys while a majority of respondents are still using plastic room keys. On the use of polythene in rooms, a minority (46%) of respondents still use plastic trash bins. This means that most accommodation facilities are struggling to reduce plastic usage at the reception areas.

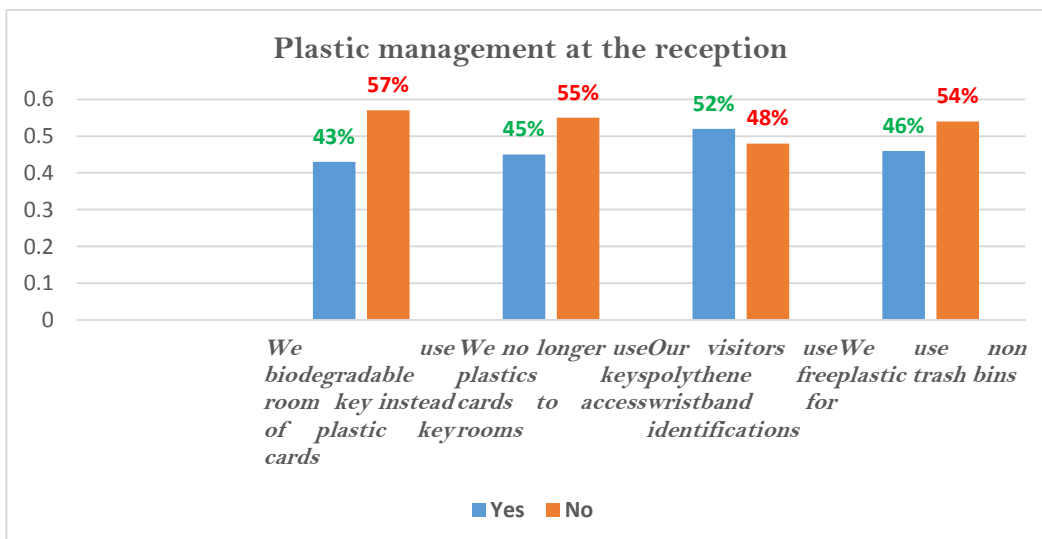


Figure 2: Plastics reduction at the reception

4.4 Plastic Reduction at the Conference Rooms

A "green" meeting is one that is organized and implemented in such a way as to minimize negative impacts on the environment and promote positive social impacts for the host community. One characteristic of such a meeting is the minimization of plastic water bottles and nametags at the conference. Although there are several variables that constitute green conferences, this study found that the majority of respondents have replaced plastic nametags with those made of bio-degradable materials in their conferences and meetings.

It was also noted that 67% of respondents provided water dispensers and glasses to the participants. They have replaced bottled water with water dispensers. This study found that plastic pens are still used by the majority of (63%) conference participants with a minority (37%) who agreed that they are using other forms of bio-degradable pens.

The ink of a pen supplied to the participants in a conference or meeting is often made up of chemicals that are toxic to the environment. When disposed of after use, there are still traces of ink which when disposed of to the landfills, and to the soil or even the groundwater pollutes it. The pen's plastic is not usually recycled, but in most cases is discarded in the trash where it may take hundreds of years to decompose. Pens made from bamboo or agricultural waste corn or wheat are considered sustainable and biodegradable are gradually replacing the plastic ones.

The majority of participants (81%) indicated that they no longer used plastic or disposable cutleries in their hotels, nor did they package guests packed meals with pulp and foam containers. About 71% of the respondents have offered environmentally friendly packed lunch boxes. The majority 59% have refillable sauce dispensers and have gradually faced out sachets in restaurants. The majority (63%) no longer use single packaging for sugar, jam, butter, honey, and salts but avail have them in bowls or jars

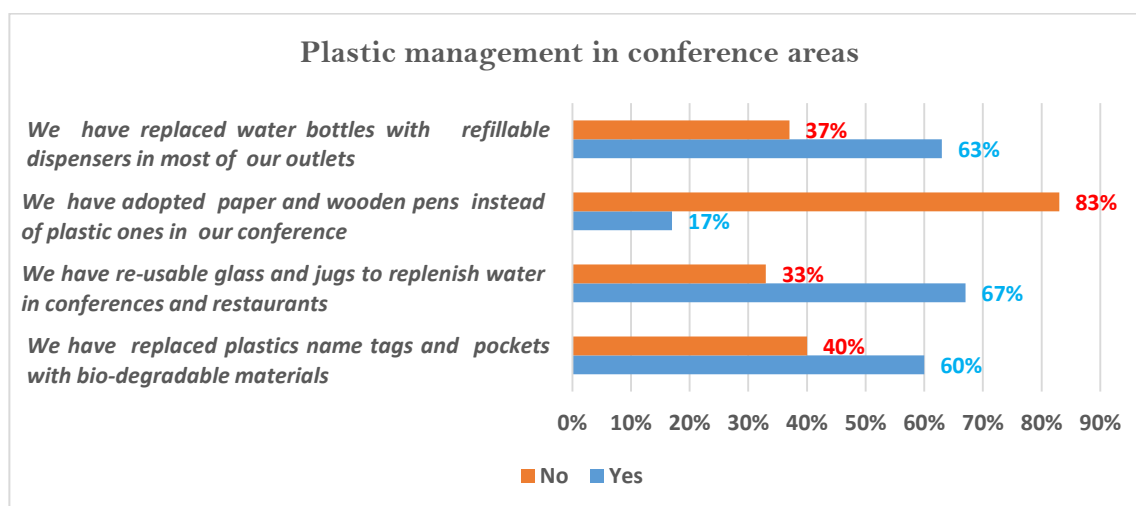


Figure 3: Plastics in conference areas

4.5 Methods of Plastic Reduction Used in Dining Areas

The study found out that the majority of the respondents (81%) come from establishments that have gradually faced out disposable cutleries. Also noted was that only 53% of respondents use water from the dispensers meaning that the remaining 47% may be using single use bottles. Likewise, a majority 59% of respondents use refillable sauce dispenser while a big percentage (41%) use plastic sachet. Majority do not use single packaging for sugar, jam, butter and honey, as indicated in Figure 4.

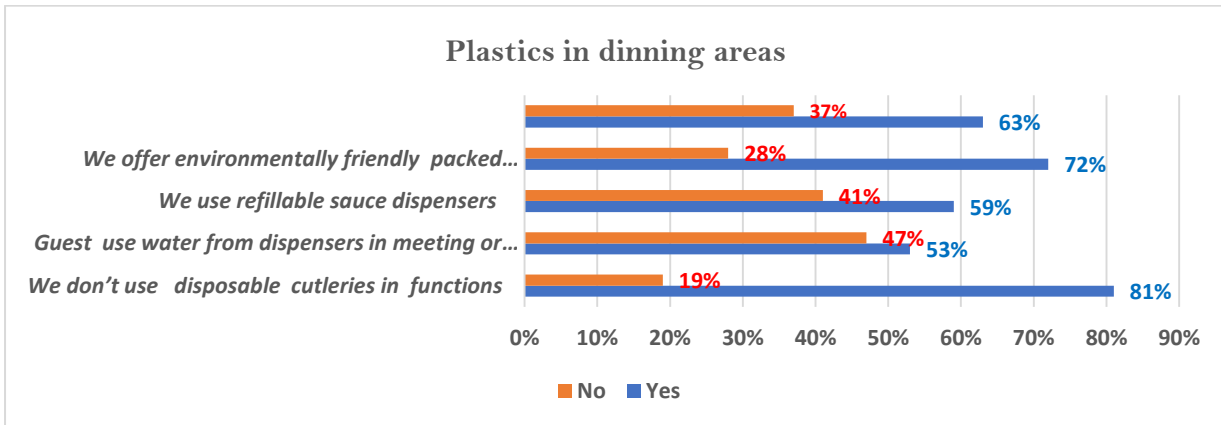


Figure 4: Plastics in the dining and restaurant

4.6 Plastic in Housekeeping and Rooms

The study found that most establishments (65%) are using non-plastic trash bags in their room with the minority (35%) who are using plastic ones. A good number (79%) have laundry bags from other materials such as cloth. About 65% have replaced single shampoo and gel containers with dispensers. This finding shows that most respondents in the hospitality sectors in Kenya have embraced different ways of reducing plastic usage in guest rooms. The momentum was affected by in Covid -19 policies and protocols on health and safety that discouraged sharing most items with the aim of minimizing the spread of the pandemic through touch (Figure 5)

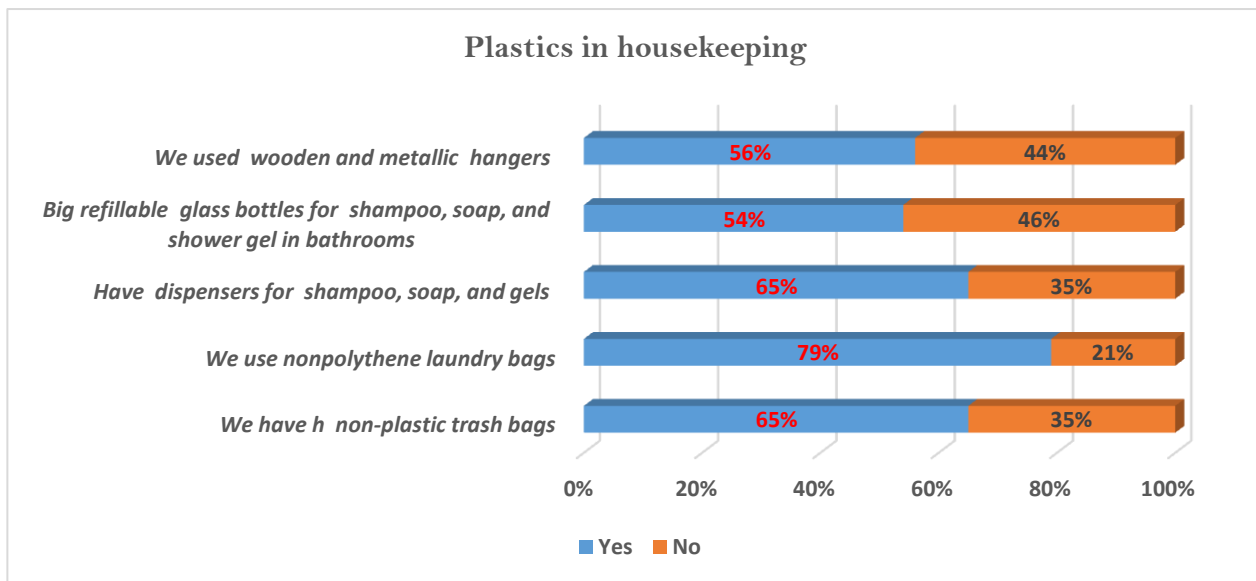


Figure 5: Plastics in house keeping

5.0 Conclusions and Recommendations

The study noted that most accommodation facilities in Kenya have a plastics reduction policy although only a handful conduct annual waste audits to know the amount and category of waste they generate, and hence make informed decisions on the most appropriate waste management methods. The rationale for not conducting regular waste audits may require a follow-up study. Some hotels have adopted green procurement practices and have programs that educate their suppliers on the effect of plastics on the planet.

From the findings of this study, the authors conclude that some accommodation sectors in Kenya appreciate the need to manage plastics and are applying one or two strategies to reduce plastic usage in their respective establishments. This is a positive development in the industry bearing in mind that the study took place in the post-COVID-19 year 2022, since the pandemic had reversed most achievements on plastics management strategies. Phasing out plastics completely in the accommodation sectors may take a longer time but reduction of usage is possible. Although there have been some efforts in replacing plastic keys with others made from degradable materials this has not been implemented by many hotels.

While some hotels reduced single-use plastics, others increased their usage due to hygiene concerns during the pandemic. Disposable items such as gloves, masks, and cleaning supplies became essential for ensuring guest and staff safety. This surge in demand for single-use items increased plastic waste. Another challenge slowing the implementation of plastics reduction initiatives is the costs associated with sourcing alternative products. Hotels, therefore, need to carefully evaluate the financial implications but also consider long-term benefits when making decisions about sustainable alternatives. By adopting an integrated plastic reduction approach, hotels can significantly reduce their negative environmental impacts and contribute to a more sustainable future. The study noted the importance of the guests and staff's education in plastics management.

Overall, the impact of COVID-19 on plastic reduction efforts in hotels varies in the respective hotels. While some hotels have made progress in reducing single-use plastics and embracing sustainable practices, others faced challenges and experienced impediments due to the increased use of disposable items. The hospitality industry must continue striving for sustainable solutions in the post-pandemic era.

The study also concludes that financial challenges faced by the hospitality industry during the pandemic may have diverted attention and resources away from sustainability initiatives. Hotels may have prioritized survival and recovery over long-term environmental goals, delaying or scaling back efforts to reduce plastics.

The study recommends that hotels should adjust their infrastructure and put in place logistics that support plastics reduction. Hotels may need to work closely with suppliers to identify suitable options and ensure a consistent supply of environmentally friendly products. Since guests' preferences and expectations play a significant role in the success of plastic reduction initiatives, hotels should strike a balance between sustainable practices and guest satisfaction. Communicating the benefits of plastic reduction and involving guests in the process will help manage expectations. Hotels should understand and comply with the applicable local regulations and policies related to waste management and environmental sustainability is essential. They will also be conversant with the relevant laws and regulations that may impact their plastics reduction efforts and ensure they are in line with legal requirements, including the Environmental Management and Coordination Act of 1999(revised 2015), the Sustainable Waste Management Act of 2022 and the Extended Producer Regulations of 2022.

As cultural norms, attitudes, and social awareness influence the acceptance and adoption of plastic reduction practices, hotels operating in different regions or catering to diverse clientele may need to consider cultural factors and tailor their strategies accordingly. It is recommended that hotels should also establish a system for tracking and measuring the progress of plastics reduction initiatives. Having clear metrics and reporting mechanisms in place allows hotels to evaluate their performance, identify areas for improvement, and communicate their achievements to stakeholders. The study recommends more research on factors affecting the reduction of plastics in the hospitality industry and looking for appropriate alternatives to plastics.

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