



Strathmore
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**THE EFFECT OF GREEN PRACTICES ON THE OPERATIONAL EFFICIENCY
OF FOUR-STAR AND FIVE-STAR HOTELS IN NAIROBI**

Submitted by

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DECLARATION

This project is my ORIGINAL work and has not been presented for a degree in any other University.

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ABSTRACT

The hotel industry has always been one of the biggest industries in the world, and also fastest growing. With more properties popping up in different locations around the world, there has also been a growing need for more resources and materials from the Earth. In addition to this, the rising issues of global warming and pollution, has created the need for hotels to be more conscious of the way in which they operate. Many hotels around the world have started to look towards adopting green practices in their operations in order to lessen the negative impact that they have on the environment. Looking at Kenya, little research had been done regarding green practices in hotels, and essentially their effectiveness in improving operations in the hotel. Therefore, the aim of this study was to determine the effect that green practices had on the operational efficiency of 4-star and 4-star hotels in Nairobi. The study used descriptive research design. The target population of the study consisted of 23 four-star and five-star hotels in Nairobi County, classified and listed according to the Tourism Regulatory Authority. The study used non-probability sampling and a sample size of 19 hotels, 5 five-star and 14 four-star was obtained. Convenience sampling method was also used to choose the hotels in light of the current COVID-19 pandemic, which has affected many hotels' operations. Primary data was collected for the study. Structured and close-ended questionnaires were used in this study as data collection tools. Descriptive analysis and correlation analysis were used to analyse the quantitative and qualitative data from the questionnaires. Descriptive analysis used statistics like percentages, mean and range to analyse data. Correlation analysis used statistics like Pearson's correlation coefficient to analyse data. The findings of the study were analysed and presented using pie charts, tables to show the descriptive data, and scatter graphs to show the correlation between adoption of green practices by hotels and the hotel's performance. In relation to 4-star and 5-star hotels, findings from the study concluded that they have to a great extent implemented green practices such as water management, air quality management and environmental purchasing into their operations. The study also concluded that there is a positive correlation between the adoption of green practices and the performance of hotels in categories like hotel service quality, star rating and status. The findings also proved that green practices were very effective in improving the operations of the hotels. The study recommended that 4-star and 4-star hotels should continue to adopt green practices in their operations as well as improve on the current ones that they have, in order to have more sustainable business operations.

Key words: Green Practices, Hotels, Operational Efficiency

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DEDICATION

This research work is dedicated to the Almighty God, who has been my protector and provider.

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TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION	1
1.1 Background of the study	1
1.2 Problem statement	2
1.3 General objectives	2
1.4 Specific objectives.....	2
1.5 Significance of the study	2
1.6 Scope and limitations of the study	3
CHAPTER TWO: LITERATURE REVIEW	4
2.1 Introduction	4
2.2 Green practices in hotels	4
2.2.1 Water management	4
2.2.2 Energy conservation.....	4
2.2.3 Solid waste management.....	5
2.2.4 Air quality management.....	5
2.2.5 Environmental purchasing	6
2.2.6 Community awareness	6
2.2.7 Permit maintenance.....	6
2.3 Adoption of green practices and hotel performance	7
2.4 Effectiveness of green practices and hotel operational efficiency	8
2.5 Conceptual framework	8
2.6 Summary of the research gap	8
CHAPTER THREE: RESEARCH METHODOLOGY	12
3.1 Introduction	12
3.2 Research design.....	12
3.3 Population and sampling	12
3.4 Data collection.....	13
3.5 Data analysis	13
3.6 Research Quality	14
3.6.1 Validity	14
3.6.2 Reliability	14
3.6.3 Objectivity	14
3.7 Ethical considerations	14
CHAPTER FOUR: RESEARCH FINDINGS	15
4.1 Introduction	15

4.2	Response rate.....	15
4.3	Demographics data of respondents	15
4.3.1	Gender of hotel respondents	15
4.3.2	Age group of hotel respondents	16
4.3.3	Job position of hotel respondents.....	17
4.3.4	Ownership of hotel.....	17
4.4	Implementation of green practices by hotels.....	18
4.4.1	Water Management.....	18
4.4.2	Energy Conservation.....	19
4.4.3	Solid Waste Management	19
4.4.4	Air Quality Management	20
4.4.5	Environmental Purchasing	20
4.4.6	Community Awareness	21
4.4.7	Permit Maintenance	21
4.5	Relationship between the adoption of green practices and performance of hotels ...	22
4.5.1	Hotel’s occupancy.....	22
4.5.2	Hotel’s growth	23
4.5.3	Hotel’s revenue and profitability	24
4.5.4	Hotel’s service quality	25
4.5.5	Customer satisfaction.....	26
4.6	Effectiveness of green practices on the operations of hotels	27
4.6.1	Effect on reduction of hotel’s carbon footprint.....	27
4.6.2	Effect on reduction of total costs of running the hotel.....	28
4.6.3	Effect on improving the hotel’s status and rating	28
4.6.4	Effect on improving hotel’s overall operating efficiency	28
CHAPTER FIVE: DISCUSSIONS		30
5.1	Introduction	30
5.2	Summary	30
5.2.1	Implementation of green practices by hotels	30
5.2.2	Relationship between the adoption of green practices and performance of hotels	30
5.2.3	Effectiveness of green practices on the operation of hotels.....	30
5.3	Conclusion.....	31
5.3.1	Implementation of green practices by hotels	31
5.3.2	Relationship between the adoption of green practices and performance of hotels	31

5.3.3	Effectiveness of green practices on the operation of hotels.....	31
5.4	Recommendations	31
5.5	Suggestions for further studies.....	31
APPENDIX.....		36

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

In today's world, there has been a rising trend of going green and becoming more environmentally friendly, with a growing number of businesses embracing the more sustainable approach. The growing environmental consciousness in the industry can be attributed to government regulation, changing consumer demand, advocacy and initiatives by non-governmental organisations (NGOs) and ethics by professional associations (Mensah, 2007). Indeed, society has become more aware of the damaging effects that business operations can have on the environment and is now striving to make a difference and bring change to that by engaging in green practices.

Green practices are all about activities that have positive environmental impacts, are environmentally friendly and sustainable. According to findings by Faulk (2000), hotels commonly use the same types of priority action areas in their environmental management programs: water, waste and energy management. When it comes to utilization of green practices in the hospitality industry, most hotels are quick to focus their practices framing around those three concerns. As managers have come to the realisation that they could save on their water and energy bill when they adopt good conservation practices (Mensah, 2007). Green practices employed by hotels may include towel and linen re-use programs, waste composting, use of energy-saving technology, recycling and much more.

The use of such green practices in hotels is expected to have a positive relationship on the attraction of guests, as they are becoming more sensitive towards the environment, and are choosing to stay at hotels that have green practices and are eco-friendly. Green businesses want to make monetary profit with green conscience while their customers are looking for green commodities for their money (Zsolnai, 2002). In that way, the guests feel that they are making positive contributions to the environment through the green practices put in place by the hotel. In the same way, hotels driven by profits will want to adopt these green practices to attract their customers.

The hospitality industry in Nairobi, Kenya has really expanded through the years with more establishments opening around the county. Moreover, this industry has been a key driver to the growth of Kenya's economy and increase in tourism. PricewaterhouseCoopers (2018) stated in a study that over a five-year forecast period (between 2018 and 2022) 13 hotels will enter the market, adding a total of 2,600 rooms and accounting for a 14% increase in hotel capacity. An increase in the number of hotels in the country, especially in the capital city Nairobi, implies that there will be a greater need of scarce resources by hotels to facilitate and successfully carry out their operations. As a consequence of this, there have been rising concerns over the environmental impacts that these developments will encompass.

With this rise in the numbers of hotels in the city, it is important to establish whether they have been adopting green practices in their business operations and the length to which they are going with an eye towards becoming more sustainable for the environment. In Kenya, the National Environment Management Authority (NEMA) have been tasked with ensuring

the protection of the environment through environmental impact assessments, auditing and monitoring, restoration and conservation orders, and easements. It is essential that these rules and regulations are followed, in order to conserve Nairobi's beautiful flora and fauna while still embracing the wonderful hotels that the city has to offer. In virtue of all of this, this research is purposed in establishing the extent to which green practices have been adopted in the hospitality industry and their effectiveness on improving operations within hotels in Nairobi.

1.2 Problem statement

This study will address the existing knowledge gap of green practices and environmental sustainability in the context of the hospitality industry in Nairobi. In the past, there has been adequate literature on green operations practices of hotels in the coastal region of Kenya (Kariuki & Stephen, 2017) and of green supply chain best practices in the hospitality industry in Kenya (Amemba, 2013). However, little research has been done on green practices in the hospitality industry, specifically in regard to hotels in Nairobi.

In addition to an insufficient amount of research having been published about green practices within the hotels in Nairobi, also research on their effectiveness in improving operations and contributing to the environmental sustainability has been lacking. Therefore, this study will focus on whether and how these green practices have been effective to hotel operations and contributed to the success of the hotel. Faulk (2000) adds on stating that there is very little attention given to items outside those, particularly social action. This study will also focus on the little-known green practices such as also empowering the local community, that also help to foster a more sustainable environmental impact for the hotels. Therefore, giving a wholistic understanding and evaluation of the green practices adopted by hotels in Nairobi.

1.3 General objectives

The general objective of the study was to establish the effect of green practices on the operational efficiency of hotels in Nairobi.

1.4 Specific objectives

The specific objectives of the study are:

- i) To identify the extent to which green practices have been implemented by hotels in Nairobi
- ii) To analyse the relationship between adoption of green practices and the performance of hotels in Nairobi
- iii) To evaluate the effectiveness of green practices on the operations of the hotels in Nairobi

1.5 Significance of the study

This study aims to seek to identify the green practices employed in hotels in Nairobi and establish the extent to which they are being used throughout hotel operations. Additionally, the findings from this study will reveal whether using these green practices in their business operations has had an impact on their performance, either positively or negatively; as well as evaluate the effectiveness of the adoption of these green practices. This will contribute to

a deeper understanding and will fill the existing knowledge gaps related to adoption of green practices in hotels within Nairobi. The findings of the research can also be used by individuals in the hospitality industry, such as future hoteliers and managers, to acquire more knowledge on green practices and consider making implementing them in their own hotels or establishments. This study can also be used by potential investors to assess the benefits of investing in an establishment that uses green practices.

1.6 Scope and limitations of the study

This focus of the research was to establish the extent to which green practices had been adopted in the hospitality industry and their effectiveness on improving operations in the hospitality industry in Nairobi. The reason for this being that the previous studies addressing green practices in Kenya have most focused on hotels in Mombasa, and not Nairobi which is the capital city and business hub of Kenya. Therefore, the study is limited to four-star and five-star rated hotels within Nairobi, but can be used as a basis of representation for the whole of Kenya.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The following chapter will critically examine past literature on the types of green practices that have been used in the past within hotels, in addition to, the effectiveness they have had on the operational efficiency of the hotels. The review will ascertain whether there is a relationship between the green practices employed by hotels and how well the hotel performs in their operations.

2.2 Green practices in hotels

Globally, green practices in hotels are becoming more popular, as businesses are shifting to more 'sustainable' and 'green' approaches when it comes to their operations, to avoid causing more harm to the environment. Hotels will need to consider most aspects of their operations when looking to implement green practices within their facility, not just one aspect or a few. Green practices include sustainable management of water, energy conservation, solid waste management, ensuring air quality, environmental purchasing, community awareness and maintenance of permits (Mbasera, Du Plessis, Saayman, & Kruger, 2016). Highlighted below are the various green practices adopted by hotels that are going to be examined in this study.

2.2.1 Water management

Water demand and supply is becoming a global issue, with the scarcity of this natural resource becoming ever-present in the modern-day world. Hotels consume and use a lot of water in various activities of their operations including food and beverage production, housekeeping and laundry, maintenance, gardening, swimming pools and spas. The amount of water consumed varies a lot of factors such as the hotel's size, class and facilities/services they offer to their guests. According to a study done by Tang (2012) on two Malaysian resorts, the water consumption per guest in guest rooms for both resorts is about 500 litres per day. This clearly shows the high volumes of water consumed by hotels in a day, therefore presenting a greater need to have water management as a green practice.

Previous research done by Dinarès and Saurí, (2015) found that "higher star hotels are likely to consume more water per establishment, have more complex consumption structures including a variety of water consuming services offered not only to guests but also visitors." Therefore, proving that it is very important for there to be proper management and conservation of water in hotels through green practices, to avoid high water consumption trends with such a scarce resource.

2.2.2 Energy conservation

Hotels are among the biggest consumers of energy all around the world, and sadly most of this consumption comes from non-renewable sources of energy. According to Mensah (2013), a huge portion of the energy consumed in hotels is towards the comfort and safety of the guests in terms of; Heating, Ventilation and Air conditioning (HVAC) systems, food production, housekeeping, entertainment, transportation. In addition to the huge portion of the energy used, unfortunately most of it goes to waste because of faulty or poor-quality systems.

Renewable energy is energy which comes from natural resources such as sunlight, wind, rain, tides, geothermal heat and biomass (Mensah, 2013). Having large consumption rates of energy has caused hotels to look for energy conservation measures that they can implement, as well as turning towards sourcing their energy from environmentally friendly renewable sources. For example, the Kilaguni Serena Safari Lodge in Tsavo National Park, Kenya, is famed for being ‘Kenya’s first fully solar powered lodge’, as it implemented a solar power plant to provide for all their energy requirement and improve environmental sustainability (Mwakio, 2018).

2.2.3 Solid waste management

Hotels produce a large amount of waste in a year, which contributes to the pollution of the environment, which creates a butterfly effect causing global warming and other adverse effects. According to the International Tourism Partnership Report (2008), about 30% of the solid waste produced by a hotel can be reused, recycled and recoverable in nature. If waste is not managed and disposed of properly, it can become an eyesore in the local environment that the hotel is located in, because it ends up in landfills or dumpsites dotted around the city; and can cause tourists to stay away due to the repulsive environment.

A study by Pham Phu, Hoang and Fujiwara, (2018) on waste characteristics and management practices of the hotels in Hoi, Vietnam revealed that the higher scale hotels have higher proportions of waste sorting practices, compared to lower scale hotels. This could therefore prove that the higher class and more luxurious hotels in Nairobi, will have better and higher waste sorting practices in their establishments, In addition to that, the reduction, re-using and recycling of solid waste, apart from just managing solid waste, can create a lot of benefits towards the hotel’s business and the local environment.

2.2.4 Air quality management

The quality of air plays a very important role in the guests’ experience while staying at a hotel. According to a study (Guo, Wei, Li & Wang, 2019) investigating the visible and invisible air pollutants and their impact on China’s hotel industry, it concluded that it is very crucial that hotels “effectively reduce the emission levels of visible air pollutants and dust,” as they are easily seen by the guest and can contribute negatively to the guest’s sensory experience and the hotel industry.

Typical indoor pollutants include inorganic gaseous compounds, particulates - (dusts, fibers, fumes, fogs and smoke), bio-aerosols-viruses, bacteria and fungi. Other sources of indoor air pollutants in hotels include: combustion sources such as oil, gas, kerosene, coal, and wood; building materials and furnishings as diverse as deteriorated asbestos-containing insulation; wet or damp carpet; cabinetry or furniture made from certain pressed wood products; products used for cleaning and maintenance; central heating and cooling systems and; humidification devices (Grieve, 1991). As a result, hotels should adopt measures to efficiently manage the indoor air quality and maintain it at acceptable levels.

2.2.5 Environmental purchasing

Purchasing is one of the first points at which hotels can help to care for the environment and implement green practices through it. Odeny, Maingi and Kurauka (2020) recommended that “hotels should embrace all the procurement procedures that contribute to environmental management to enjoy their benefits, in particular, tendering adverts that attract suppliers offering environmentally friendly products”. Thus, ensuring that suppliers and their products are eco-friendly before making purchases is key, for the purpose of hotels being more proactive in their green practice measures, instead of being reactive. In addition to that, hotels can purchase detergents that are eco-friendly, biodegradable paper, tissue and other materials.

Having said that there might be concerns and challenges that hoteliers feel when it comes to environmental purchasing, including higher costs of eco-friendly or biodegradable products, whether the ‘green purchases’ will be up to standard for the hotel and their guests and whether they will have a variety of options to choose from. Nevertheless, the costs that come as a result of green practices adopted by hotels, cannot compare to the cost that arises from a lack of green practices adopted by the same – therefore, there has to be a compromise.

2.2.6 Community awareness

In order for green practices to be effective in a hotel, they should be appreciated and followed by every member of the hotel’s internal and external community. In regard to the employees that work at the hotel; hotels should ensure that they communicate their green practice vision to employees and motivate them to engage in green practices and inform their employees of green practices and their implication of costs (Fukey & Issac, 2014).

In terms of the local community, the hotel can work directly with them or with an NGO to raise awareness and work towards making positive contributions to the environment. Kamaruddin, Ahmad and Alwee (2015) affirmed that the level of awareness of the environment by the community can be measured by the participation levels in an environmental program. Therefore, low participation levels by the community reveal that there is a lack of awareness and information on green practices, of which the hotels can help to educate and raise awareness on such issues.

2.2.7 Permit maintenance

In Kenya, the National Environment Management Authority (NEMA) ensures that there is compliance with the rules and regulations stated out in the Environmental Management and Co-ordination (Amendment) Act 2015. In order for a hotel to be operational, they require a NEMA licence which is acquired by a facility after an environmental impact assessment has been carried out, and an effluent discharge license to ensure that the discharge released into the sewage is done correctly and to the recommended standards. By following these rules and regulations, hotels are embracing green practice as they are operating in by the standards set by NEMA in regard to the environment, water, biodiversity, air and waste regulations.

In the past, even top hotels in Kenya have been shut down by NEMA because of failure to comply with the NEMA Water quality regulations, that have been outlined for all facilities

including hotels to follow (Kipkemoi, 2019). NEMA also issues improvement order to hotels, in the case that they are not up to standard and enhancement, which hotels will need to follow to avoid being shut down.

2.3 Adoption of green practices and hotel performance

Green practices are increasingly becoming adopted by hotels all across the globe as a result of the benefits they have towards the success of the hotel's performance. The performance of a hotel is crucial in determining its success among competitors, in addition to how long it will stay in business and be profitable. A content analysis study of 79 scientific papers revealed that hotel performance can both be measure by both financial and non-financial indicators, despite the multi-dimensional aspect of hotel performance. Pnevmatikoudi and Stavrinoudis' (2016) study found the following:

The financial indicators of hotel performance includes sales/revenue, profitability, return on investment capital, hotel occupancy, costs/expenses, growth, productivity/utilization, composite indicators of economic performance and financial liquidity and soundness. Whereas, the non-financial indicators of hotels include customer satisfaction, employee satisfaction, employee work/job performance, service quality, competitive position, manager's work/job performance, flexibility, organizational achievement and social responsibility. (p.86-88)

According to Smith & Perks (2013) "managers need to develop systems and structures within their business that satisfy the requirements of green business practices while still achieving strategic business goals." The study was investigating the relationship between six business functions and the impact of green practices that have been implemented within the business. Although the study was conducted on business owners within Nelson Mandela Metropole, South Africa in the form of a survey; the results showed that within the operations function, businesses that use green technology and reduce their impacts on the environment, are more likely to remain competitive. This suggests that the adoption of green practices in hotels can simultaneously help hotels in achieving their business goals and boost their performance among competitors.

Similarly, another study closer to Nairobi was conducted by Osiako and Kummitha (2020), and it examined the environmental management practices adopted by coastal beach hotels in Kenya. Star-rated hotels along the Kenyan coastal area were used for the study, and a cross-sectional survey design was utilized by the researchers. The results of the study indicated that most hotels had employed environmental management practices "geared towards conservation of energy and water." Additionally, the research findings highlighted that out of the 32 hotels, the higher the star-rating of the hotel, then the more likelihood for the hotel to adopt the environmental management practices within it.

Previous studies have shed light on the impact of hotel green practices on customer satisfaction, which really plays a huge role in hotel performance. A study examining the impact of green experiences on customer satisfaction by looking at the reviews for the top 10 green hotels in the U.S, stated that "green practices implemented at hotels significantly

impact customer satisfaction” (Yu, Li, & Jai, 2017). The evidence from this hotel suggests that as long as hotels implement green practices in their operations, they will greatly increase the satisfaction levels of the customers they serve and improve on their performance overall.

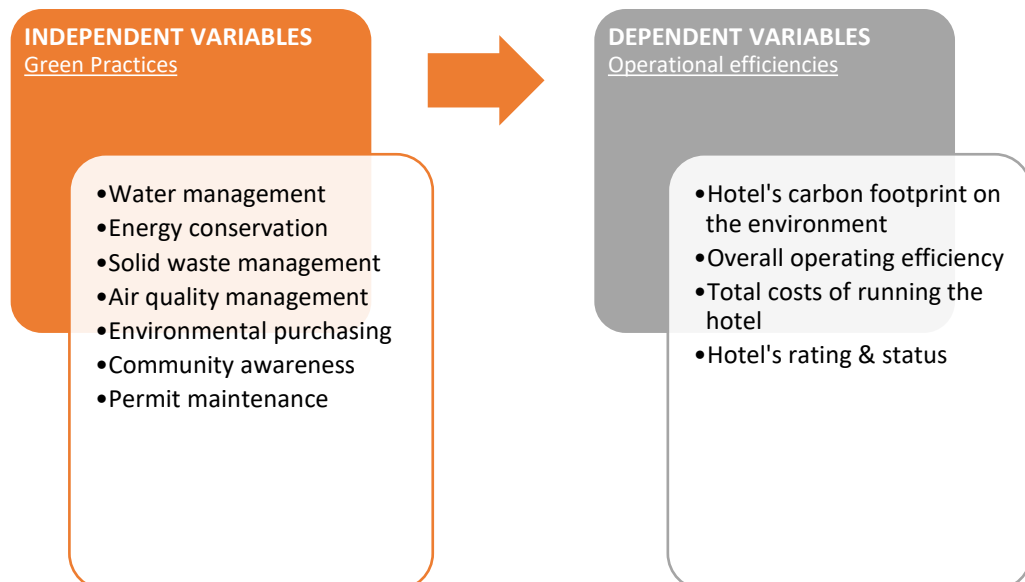
2.4 Effectiveness of green practices and hotel operational efficiency

According to a study done by Kariuki and Stephen (2014), the implementation of green practices was very significant as it had a beneficial impact on the operational performance of the hotels studied. The study was carried out in 2014 on 47 hotels in the coastal region of Kenya. Using regression analysis to investigate the relationship between green practices and operational performance, the results showed “the nature of the positive significant relationships between the operational performance and energy consumption, water consumption, waste generation, reduction and recycling and employee training and awareness.” Using correlation analysis, the study findings also revealed that the operational performance index was significantly related to both energy and water consumption in a positive way. However, since this study was limited to hotels in the coastal region of Kenya, we cannot know if the same positive relationship between green practices and operational efficiencies will hold true for hotels within Nairobi.

2.5 Conceptual framework

The figure below illustrates the conceptual framework for this study. The variables have been clearly displayed and organized, to show how they will help achieve the purpose of this research study. The independent variables are the green practices that have been adopted and implemented by hotels in Nairobi, whereas the dependent variables are the operational efficiencies that result from the green practices.

Figure 2.5.1: Conceptual framework of the study



2.6 Summary of the research gap

There has been little research on the impact of green practices on the operational efficiencies for hotels. Green practices in hotels have been studied multiple times before, in relation to

its impact on the business (Smith & Perks, 2013). However, there has been inadequate research on the impact of green practices on the operational efficiencies for hotels in Nairobi. Most of the literature on green practices in hotels are in the context of hotels in Mombasa (Kariuki and Stephen, 2017). This study will focus on adoption and implementation of green practices in hotels, analyse the relationship between adoption of green practices and the performance of hotels and evaluate the effectiveness of adopting green practices on the operations of the hotels in Nairobi.

The environment is not becoming any less polluted or harmed, therefore there is a growing urgency for businesses to address this by becoming more sustainable and adopting these green practices. The very essence of the hospitality industry is embedded in the beauty and aesthetics that lie in the flora and fauna of the planet, however, if hotels continue to operate ‘business as normal’, then sooner or later the damage and degradation to the environment will be irreversible and hotels will be out of business. Table 2.6 has a detailed summary of the research gap.

Table 2.6: Detailed summary of research gaps

Author	Title	Findings	Research Gap	Focus of Current study
Eric Kariuki Odock Stephen, PhD	Relationship between green operations practices and operational performance of hotels in the coastal region, Kenya	The study also established that there is a strong positive correlation between green operations practices and operational performance. Hotels view the green operations practices as very important hence adoption of green operations practices by hotels have a positive effect on operational performance.	The study only covered hotels in the coastal region of Kenya. The study did not look at the effectiveness of adopting green practices on the performance of the hotel.	The current study is focused 4* and 5* hotels in Nairobi, Kenya. The current study will analyse the relationship between adoption of green practices and the performance of hotels in Nairobi.
Peter Onyonje Osiako and Harshvardhan	Environmental management practices among coastal	The general level of adoption and implementation of environmental management practices was below average and that there was no significant relationship between hotel star category and extent of adoption	It was carried out among 47 star-rated hotels found on the Kenyan coastal area. The study looks at environmental management	The focus of the current study is To identify the extent to which green practices have implemented, to analyse the relationship between

Reddy Kummita	beach hotels in Kenya	<p>of environmental management practices.</p> <p>Environmental management practices related to energy conservation and water conservation were adopted by the majority of the hotels in the study.</p>	practices as perceived by hotel managers of the classified hotels	<p>adoption of green practices and the performance of hotels, to evaluate the effectiveness of green practices on the operations of the hotels in Nairobi</p> <p>looking at 5* and 4*star hotels in Nairobi, Kenya.</p>
Miriam Mbasa, Englina Du Plessis, Melville Saayman, Martine Kruger	Environmentally friendly practices in hotels	<p>The study revealed that while the hotels that participated in the study generally have no green management policies, they have implemented some green initiatives. Green management initiatives implemented in hotels range from energy saving, use of solar energy, maintaining a paperless environment through a no-print policy, saving water by using towels more than once before laundering, reuse of soap bottles and waste management. The study has also revealed that green management has been adopted by some hotels for marketing reasons in order to retain customers and to gain a competitive advantage.</p>	This research study determined the environmentally friendly practices adopted in 3- to 5-star-graded hotels in Zimbabwe and South Africa. This was the first time that a study of this nature was carried out on green practices in hotels.	<p>The focus of the current study is</p> <p>To identify the extent to which green practices have implemented, to analyse the relationship between adoption of green practices and the performance of hotels, to evaluate the effectiveness of green practices on the operations of the hotels in Nairobi</p> <p>looking at 5* and 4*star hotels in Nairobi, Kenya.</p>
Ishmael Mensah	Environmental management and sustainable tourism	<p>Majority of managers of hotels in Accra are inactive in the areas of recycling and use of solar energy although some larger multinational hotels are more</p>	This study was, however, exploratory and did not delve deep into the reasons for hotels' activity or inactivity in	The current study will focus on 4* and 5* rated hotels in Nairobi Kenya and identify the extent to which green practices have implemented, to analyse the

	development: The case of hotels in Greater Accra Region (GAR) of Ghana	proactive. The most popular environmental management and sustainable tourism practices of the hotels were use of energy-efficient light bulbs and re-use of linen and towels	environmental management.	relationship between adoption of green practices and the performance of hotels, to evaluate the effectiveness of green practices on the operations of the hotels
E. E. Smith and S. Perks	A perceptual study of the impact of green practice implementation on the business functions	The main objective of the study was to explore how businesses perceive the impact of green practice implementation on the business functions. The ANOVA results clearly indicate the statistically significant relationships between the independent variables (classification data) and dependent variables (business functions).	A convenience sample was drawn from the target population in the Nelson Mandela Metropole, which could have impacted on the representativeness of the sample.	The current study will focus on 4* and 5* rated hotels in Nairobi Kenya. The current study will identify the extent to which green practices have implemented, to analyse the relationship between adoption of green practices and the performance of hotels, to evaluate the effectiveness of green practices on the operations of the hotels

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter of the paper presents the research methodology that was utilized during the collection and analysing of the data. The contents of this chapter include the research design, population, and sampling of the study. It will also include the data collection, data analysis and the ethical considerations of the study carried out.

3.2 Research design

The nature of this study is to discover answers relating to the effect of green practices on the operational efficiency of four-star and five-star rated hotels in Nairobi. For the purpose of this study, the researcher used a descriptive research design. This is because apart from trying to find the answers regarding who, what, when, where and how; the study also looked at the relations among different variables. This design is applicable to the study as the researcher did not manipulate or control the variables but however, did carry out survey on and measured them.

3.3 Population and sampling

According to a report published by the Tourism Regulatory Authority there are 59 classified hotels in the greater Nairobi Area (includes Machakos and Kajiado county), however in Nairobi County alone, there are 53 hotels. For the purpose of this study, the target population consists of four-star and five-star rated hotels in the city of Nairobi. Of the classified hotels, there are a total of 29 in the research's target population, 17 are four-star and 12 are five-star hotels. Due to the worldwide COVID-19, some of the hotels (such as The Fairmont Norfolk, Southern Sun Mayfair and others) had shut down or suspended operations, leaving the total population for study at 23.

Four-star and five-star hotels were chosen for this study due to their star ratings and hotel size; the hotels utilize standard operating procedures (SOPs) in their operations, and they are more likely to be familiar and have adopted some green practices in the operations of their hotels. Carrying out the study on these specific hotels also helped to prevent varied data that would have come from a generalized population.

A non-probability sampling method, of convenience sampling, was used in the study due to its advantage in cost, time and feasibility when it comes to the research being carried out. Non-probability sampling cost less in terms of planning and carrying out the research activities involved, it takes less time in terms of planning and execution of sampling, and it is the most feasible sampling method, as currently not all four-star and five-star hotels in Nairobi are available for study due to the current COVID-19 pandemic.

The following sample size formula, $n = \frac{N}{1+N(e)^2}$, whereby n is equal to the sample size, N is the total population size and e is the acceptable sampling error. A margin of error of 10% is acceptable in this study, as it is not too large to reduce the reliability of the research findings and results. Using this formula, a sample size of 19 four-star hotels and five-star hotels was used for the study.

The researcher chose convenience sampling as the most suitable sample method for the study. It was used to choose which 19 hotels out of the total population was going to be used to carry out the research. This method was chosen for the researcher to carry out their research at a lower cost compared to other sample options, and in an easier manner that is more convenient and without complications for the researcher.

3.4 Data collection

For purposes of this study, primary data was collected from the original source of information, that being directly from the hotel. This type of data provided to be more reliable, trusted and have a greater level of confidence with the researcher. The primary data source was in the form of a questionnaire given to respondents for the hotel. This research tool was appropriate in order to obtain data aligned with the key objectives of the study, as well as it was presumed that the respondents had the required reading, writing and thinking skills to answer the questionnaire.

The questionnaires were both structured and close-ended in order to generate data for the study on the effect of green practices adopted by hotels in Nairobi. The data in the study was controlled by looking at seven variables that are linked to green practices including management of water, energy conservation, solid waste management, ensuring air quality, environmental purchasing, community awareness and maintenance of permits.

The most suitable respondents for the questionnaires that the researcher was aiming for were hotel managers (or their equivalent), especially the general manager or maintenance/engineering manager, as they are more likely to be knowledgeable about green practices and whether they have been implemented at their hotel.

3.5 Data analysis

The data obtained from the questionnaires was both qualitative and quantitative in nature. The data was then validated and checked for accuracy and completeness before being used in analysis. Data obtained for the first and third objective of the research was tabulated and analysed using descriptive analysis. This was to establish the extent to which green practices are used in hotels and their effectiveness on operations of hotels in Nairobi.

Correlation analysis was used for the second objective in this study, for the purpose of effectively measuring the effect and relationship between green practices and the operational efficiencies of four-star and five-star hotels in Nairobi. This established whether the correlation between the two variables is either positive, negative or not existing. The Pearson's correlation coefficient formula used to obtain the R-value that described the relationship between the two variables was as follows:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

where n is the number of pairs of data,

x = first score,

y = second score,

$\sum xy$ = sum of the product of both scores,

$\sum x$ = sum of first scores,

$\sum y$ = sum of second scores,

$\sum x^2$ = sum of squares of first set of scores, and

$\sum y^2$ = sum of squares of second set of scores.

An r value of -1 means that the relationship is negative, whereas a value of 1 means that the relationship is positive. Values of 0 indicate no correlation between the two variables.

3.6 Research Quality

3.6.1

Validity

The validity of the research assesses how true, trustworthy and accurate are the measures. To ensure the validity of this research, the researcher ensured to use the correct formula and perform accurate calculations to get the sample size of the population. In addition to this, convenience sampling was chosen as the most appropriate method, especially in regard to the current times and environment of where the research will be carried out.

3.6.2

Reliability

The reliability of the research assesses how consistent the measures are. To ensure the reliability of the research, the researcher ensured to apply consistent methods through the whole study and kept the conditions standardized. This was to ensure that there are consistent results with the findings of the study.

3.6.3

Objectivity

The objectivity of the research assesses whether it has been distorted by personal bias. To ensure that the research stayed purely objective, the researcher chose a research problem that had no link to their beliefs, values, etc,

3.7 Ethical considerations

The researcher took into consideration the ethical issues involved before, during and after carrying out this study. Firstly, the data from this research is true and the research was completely honest with the findings. The respondents representing the different hotels were not coerced to participate in this study, it was purely voluntary and consensual. In addition to this, consent was obtained as an agreement of trust between the researcher and the respondents. Any forms of biasness were avoided.

CHAPTER FOUR: RESEARCH FINDINGS

4.1 Introduction

Included in this chapter, is presentation of the data analysis and interpretation obtained from the research questionnaires for the study. Data presented is on the effects of green practices on operational efficiencies of hotels in Nairobi and seek to answer the research objectives of the study. The data collected from the questionnaires was collected, analysed and presented in the form of tables, graphs and charts.

4.2 Response rate

Table 4.2 below displays the response rate of the hotels that participated in the study. The study had targeted 19 responses from 4-star and 5-star hotels in the Nairobi county. A total of 6 completely filled responses were received from hotels, which made up the response rate of 31.6%.

The 68.4% of non-responses to the questionnaires given to the hotels can be attributed to various reasons such as, the hotel declining to participate in the study, the hotel respondent lack of availability to fill out the questionnaire even after follow-up calls and emails from the researcher, and the crippling effects of the COVID-19 pandemic.

Table 4.2.: Response rate table

Response Rate	Frequency	Percentage (%)
Filled questionnaires	6	31.6
Non-response questionnaires	13	68.4
Total	19	100

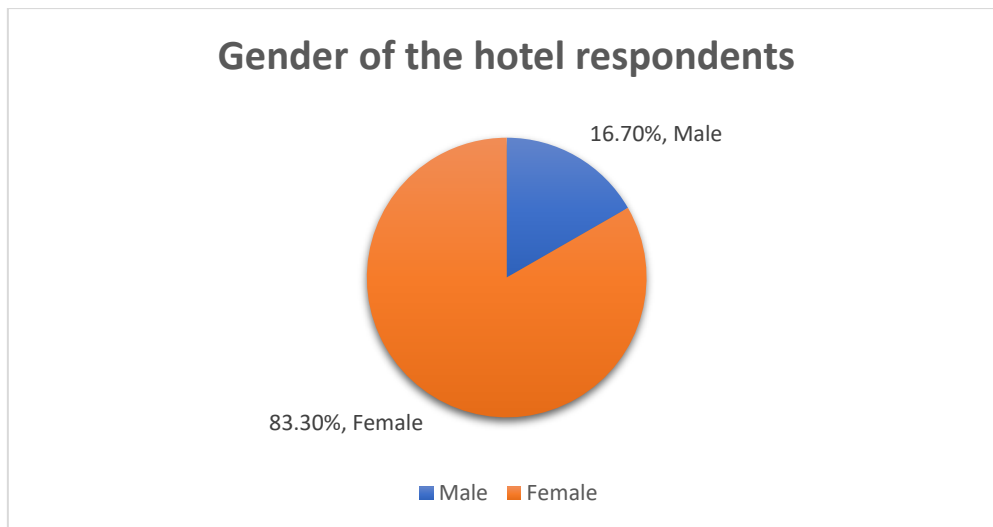
4.3 Demographics data of respondents

In this part of the questionnaire, the researcher background information and demographics data from the hotels' respondents. In this section the hotel's respondent's gender, age, job position and the hotels' ownership.

4.3.1 Gender of hotel respondents

In this question, the hotel respondents were required to indicate their gender. The results of this is shown in Figure 4.3.1 below.

Figure 4.3.1: Gender of hotel respondents

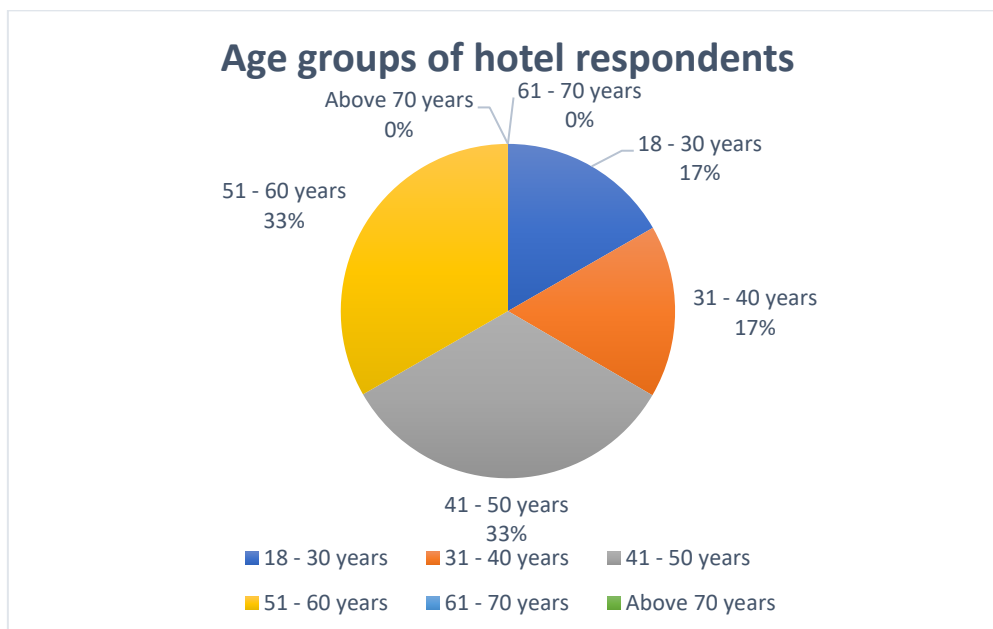


From the total received responses of the study, 83.3% were female while the other 16.7% were male. This is summarized in Figure 4.3.1 below.

4.3.2 Age group of hotel respondents

In this question, the hotel respondents were required to select the sage group that they fall within. The results are represented in Figure 4.3.2 below.

Figure 4.3.2:Age of hotel respondents



The largest percentage of respondents were in the age groups of 41-50 years and 51-60 years, with a percentage of 33% each. The age groups of 18-30 years and 31-40 years were equal, each representing 17% of the respondents. There were no respondents who were either 61-70 years, or above 70 years.

4.3.3 Job position of hotel respondents

In this question, the respondents were asked to indicate the job position they have at the hotel they are working in. The findings of the study are shown in the figure below.

Figure 4.3.3: Job position of hotel respondents

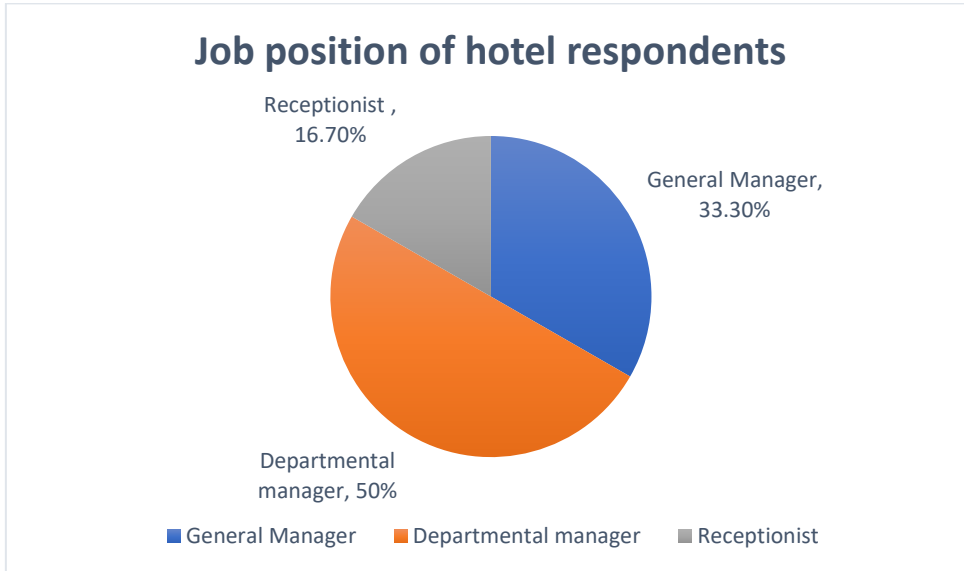
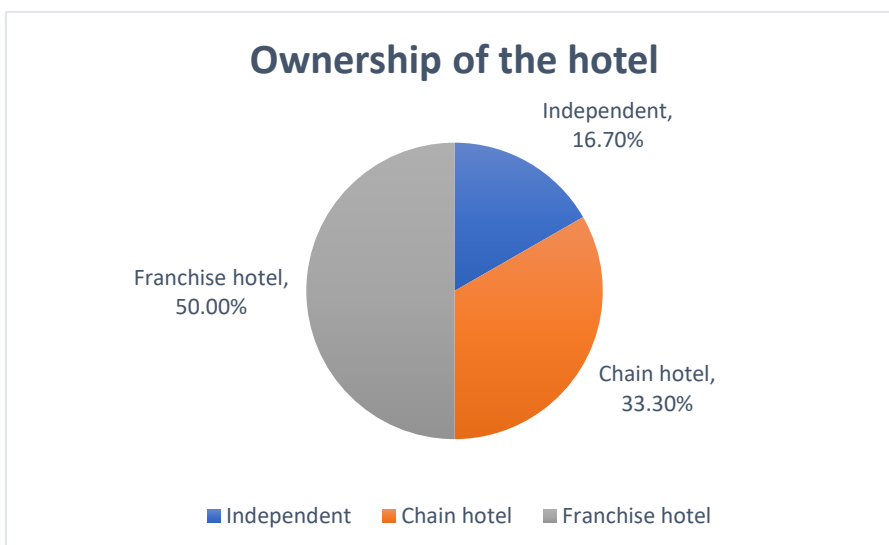


Figure 3.3.3 shows that out of the total number of responses received, 50% are departmental managers, 33.30% are general managers and 17.70% are receptionists at their hotels. This implies that more than half of the respondents to the questionnaire were managers and had senior roles in the hotels that they worked at.

4.3.4 Ownership of hotel

In this question, the respondents were required to indicate the type of ownership that their hotel has. As findings of the study are shown in Figure 4.3.4 below.

Figure 4.3.4: Ownership of hotel



From the finding, most of the respondents (50%) stated that they are a franchise hotel, 30.30% stated that they were a chain hotel and 16.70% stated they were independently owned.

4.4 Implementation of green practices by hotels

In this next section of the questionnaire, the hotel respondents were required to indicate the extent, from very frequently to never, of which they use various different green practices in their hotel establishments. The categories of green practices included water management, energy conservation, solid waste management, air quality management, environmental purchasing, community awareness and permit maintenance. Likert scale data from the multiple questions under each of the variables were scored from 1 – 6; 1 being never, 2 being very rarely, 3 being rarely, 4 being occasionally, 5 being frequently and 6 being very frequently. They were summed together, averaged and tabulated for descriptive analysis purposes.

The scoring range of the values for the Likert scale of the survey is as shown below and will be used as a reference in the analysis.

Table 4.4: Range of answer options for questionnaire averages

Answer	Value	Range
Never	1	1.00 – 1.83
Very Rarely	2	1.84 – 2.67
Rarely	3	2.68 – 3.51
Occasionally	4	3.52 – 4.35
Frequently	5	4.36 – 5.19
Very Frequently	6	5.20 – 6.00

4.4.1 Water Management

In this part of the questionnaire, the respondents were asked to state how frequently they use water management green practices in their hotel.

Table 4.4.1: Water management responses score sum and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q1) a	36	6	6.00	4.74
Q1) b	34	6	5.67	
Q1) c	26	6	4.33	
Q1) d	33	6	5.50	
Q1) e	34	6	5.67	
Q1) f	20	6	3.33	

Q1) g	16	6	2.67	
Total	199	42		

According to the findings, the mean of the total summed responses for water management green practices is 4.74. Using Table 4.4, a mean of 4.74 indicates that most of the hotels frequently use water management green practices within their establishment. Questions with responses above 30, indicated that the water management practices such as monitoring and recording the hotel’s total water consumption, checking taps and pipes for leaks on regular basis, using water-efficient appliances, equipment and devices, and using low-flow or dual flush toilets.

4.4.2 Energy Conservation

In this part of the questionnaire, the hotel respondents were asked to indicate how frequently they use energy conservation green practices in their hotel.

Table 4.4.2:Energy conservation response score sum and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q2) a	36	6	6.00	5.40
Q2) b	35	6	5.83	
Q2) c	36	6	6.00	
Q2) d	35	6	5.83	
Q2) e	21	6	3.50	
Q2) f	34	6	5.67	
Q3) g	30	6	5.00	
Total	227	42		

Shown in the findings above, the mean of the total summed responses for energy conservation green practices is 5.40, which is fairly high. According to Table 4.4, a mean of 5.40 implies that on average the hotels used energy conservation green practices very frequently around their hotel. Questions with a high sum score (above 30), means that the energy conservation practices were very frequently used by hotels. These include included monitoring and recording the hotel’s total energy consumption on a monthly basis, using energy efficient heating/cooling systems and energy saving lighting systems.

4.4.3 Solid Waste Management

In this part of the questionnaire, the hotel respondents were asked to state how frequently they utilize solid waste management green practices within their establishment.

Table 4.4.3: Solid waste management responses score sum and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q3) a	30	6	5.00	5.25
Q3) b	33	6	5.50	
Total	63	12		

According to the findings, the mean of the total summed responses for water management green practices is 5.25. Using Table 4.4, a mean of 5.25 suggests that most of the hotels very frequently implement solid waste management practices, such as sorting waste into categories or reusing materials in their operations.

4.4.4 Air Quality Management

In this part of the questionnaire, the respondents were asked to state how frequently they use air quality management green practices in their hotel.

Table 4.4.4: Air quality management responses sum score and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q4) a	33	6	5.50	5.83
Q4) b	36	6	6.00	
Q4) c	36	6	6.00	
Total	105	18		

Based on the findings above, the mean of the total summed responses for air quality management green practices is 5.83, which is high mean value. According to Table 4.4, a mean of 5.83 signifies that usage of air quality management practices is very frequent with the hotels. Responses with high sums meaning that they are used frequently, included practices such as more that 75% of rooms being non-smoking, indoor non-smoking policy and inspection of ventilation systems.

4.4.5 Environmental Purchasing

In this part of the questionnaire, the hotel respondents were asked to indicate how frequently they utilize environmental purchasing green practices in their hotel.

Table 4.4.5: Environmental purchasing responses sum score and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q5) a	34	6	5.67	5.67
Q5) b	34	6	5.67	
Total	68	12		

Shown in the findings above, the mean of the total summed responses for environmental purchasing green practices is 5.67, which is a high mean value. According to Table 4.4, a mean of 5.67 indicates that environmental purchasing practices such as purchasing locally or eco-friendly food, product and materials is done very frequently by the hotels in the study.

4.4.6 Community Awareness

In this part of the questionnaire, the respondents were asked to state how frequently they adopted community awareness green practices in their hotel.

Table 4.4.6: Community awareness responses sum score and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q6) a	33	6	5.50	5.13
Q6) b	33	6	5.50	
Q6) c	30	6	5.00	
Q6) d	27	6	4.50	
Total	123	24		

Based on the findings above, the mean of the total summed responses for community awareness practices is 5.13, which is a fairly high mean. According to Table 4.4 above, a mean of 5.13 represents community awareness is frequently adopted by the hotels. Most frequently adopted community awareness practices included informing guests of hotel green practices and environmental policies, as well as involving guests or the public in efforts to implement green practices in operations.

4.4.7 Permit Maintenance

In this part of the questionnaire, the hotel respondents were asked to state how frequently they used permit maintenance as a green practice within their establishment.

Table 4.4.7: Permit maintenance response sum score and mean

Question	Sum score of responses	No. of responses	Mean score of each question	Mean of total summed responses
Q7) a	33	6	5.50	5.50
Total	33	6		

According to the findings in the table above, the mean of the total summed responses for permit maintenance green practices is 5.50. Using Table 4.4, a mean of 5.25 which is a high mean value, indicates the hotels use of permit maintenance is very frequent. Most of the hotels are very frequently certified by an environment or eco-label certification scheme.

4.5 Relationship between the adoption of green practices and performance of hotels

In this section of the questionnaire, the hotel respondents were required to rate the average performance of their hotel after adoption of green practices in their hotel. A Likert scale of 1-10 was used; with 1-2 being very poor, 3-4 being poor, 5-6 being fair, 7-8 being good and 9-10 being excellent.

The data was analysed using Pearson correlation analysis, to identify if there was a relationship between the adoption of green practices and the performance of the hotels. The total sum of score of the adopted green practices was taken from the data in the previous section of the questionnaire for each hotel.

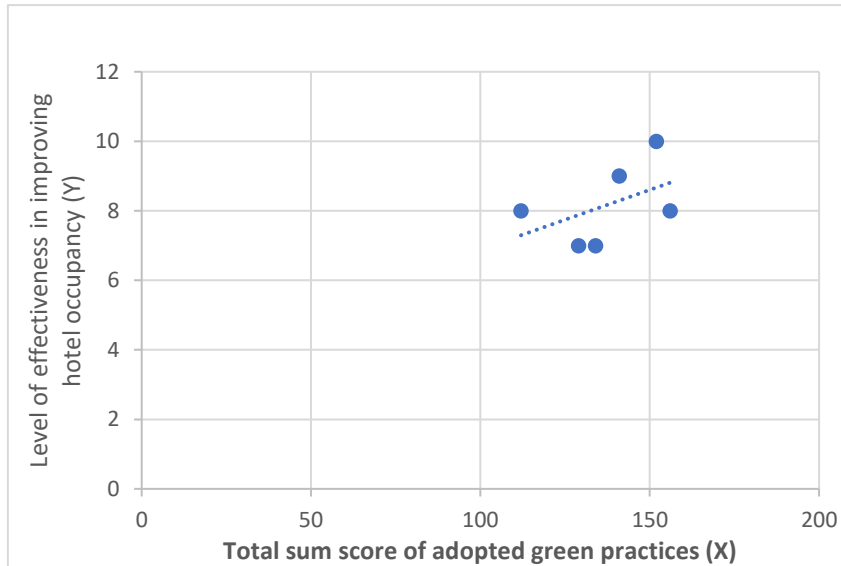
4.5.1 Hotel's occupancy

Table 4.5.1: Hotels' occupancy Pearson correlation coefficient table

Hotels	Total sum of score of adopted green practices (X)	Level of effectiveness in improving hotel occupancy (Y)	XY	X ²	Y ²
Hotel A	134	7	938	17956	49
Hotel B	112	8	896	12544	64
Hotel C	141	9	1269	19881	81
Hotel D	152	10	1520	23104	100
Hotel E	129	7	903	16641	49
Hotel F	156	8	1248	24336	64
Total	824	49	6774	114462	407

Using the Pearson's correlation coefficient formula, $r = 44.667 / \sqrt{((1299.333)(6.833))}$, the data from the two variables resulted in a R value of 0.474. This proves that there is a positive correlation between the adoption of green practices in a hotel and the improvement in the hotel's occupancy rate. However, since the value is closer to zero, it indicates a moderately positive relationship between the two variables, as depicted in the Figure 4.5.1 below.

Figure 4.5.1: Hotel occupancy vs. Adoption of green practices



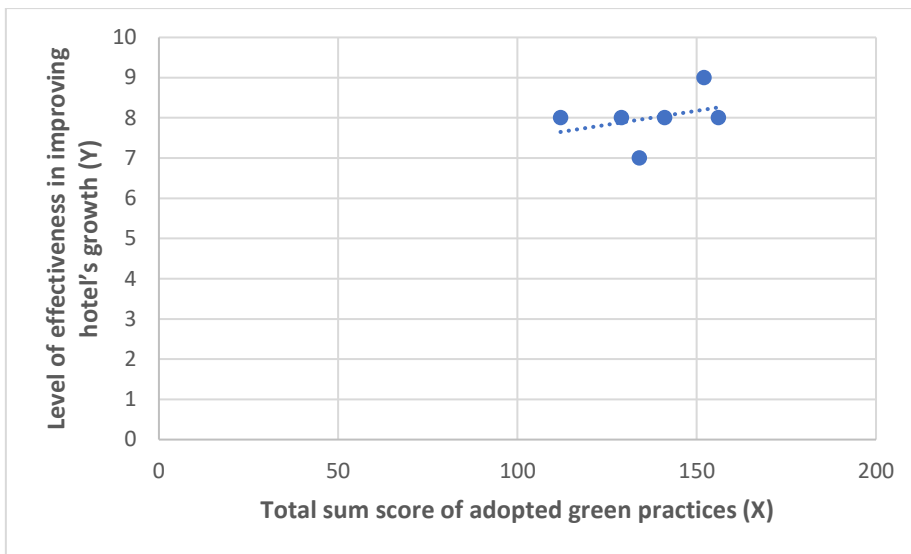
4.5.2 Hotel's growth

Table 4.5.2: Hotels' growth Pearson correlation coefficient table

Hotels	Total sum of score of adopted green practices (X)	Level of effectiveness in improving hotel's growth (Y)	XY	X ²	Y ²
Hotel A	134	7	938	17956	49
Hotel B	112	8	896	12544	64
Hotel C	141	8	1128	19881	64
Hotel D	152	9	1368	23104	81
Hotel E	129	8	1032	16641	64
Hotel F	156	8	1248	24336	64
Total	824	48	6610	114462	386

Using the Pearson's correlation coefficient formula, $r = 18 / \sqrt{((1299.333)(2))}$, the result of the R value for the two variables is 0.353. This indicates that there is a positive correlation between the adoption of green practices in a hotel and the hotel's growth. The R value shows that the relationship is a weak positive correlation between the two variables, as the value is almost close to zero. This is further depicted in Figure 4.5.2 below.

Figure 4.5.2: Hotel growth vs. Adoption of green practices



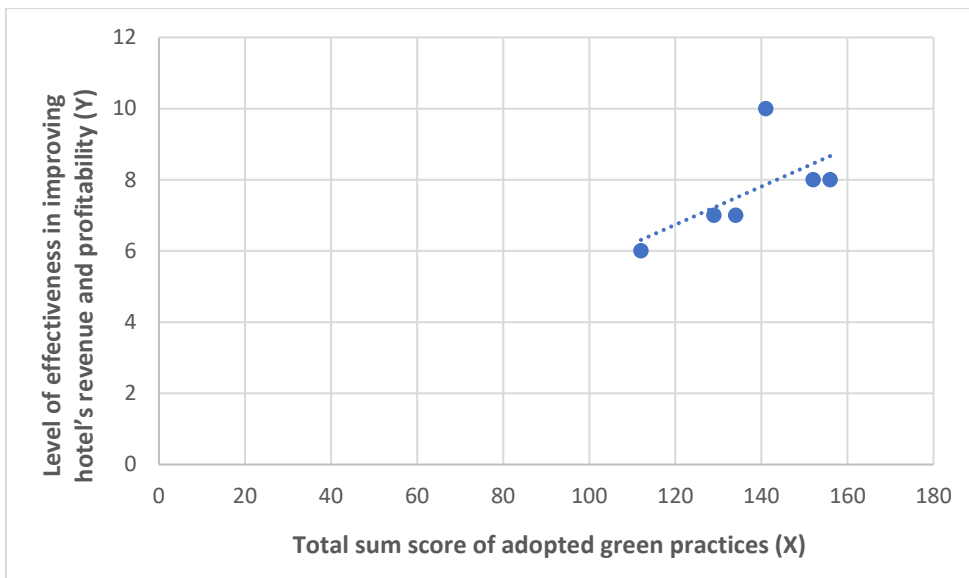
4.5.3 Hotel's revenue and profitability

Table 4.5.3: Hotel's revenue and profitability Pearson correlation coefficient table

Hotels	Total sum of score of adopted green practices (X)	Level of effectiveness in improving hotel's revenue and profitability (Y)	XY	X ²	Y ²
Hotel A	134	7	938	17956	17956
Hotel B	112	6	672	12544	12544
Hotel C	141	10	1410	19881	19881
Hotel D	152	8	1216	23104	23104
Hotel E	129	7	903	16641	16641
Hotel F	156	8	1248	24336	24336
Total	824	46	6387	114462	114462

Using the Pearson's correlation coefficient formula, $r = 69.667 / \sqrt{((1299.333)(9.333))}$ the result was an R value of 0.633. This demonstrates that the relationship between the two variables, the adoption of green practices in a hotel and the hotel's revenue and profitability has a positive correlation. As shown in Figure 4.5.3, a R value of 0.633 implies that the correlation between the variables is highly positive.

Figure 4.5.3: Hotel's revenue and profitability vs. Adoption of green practices



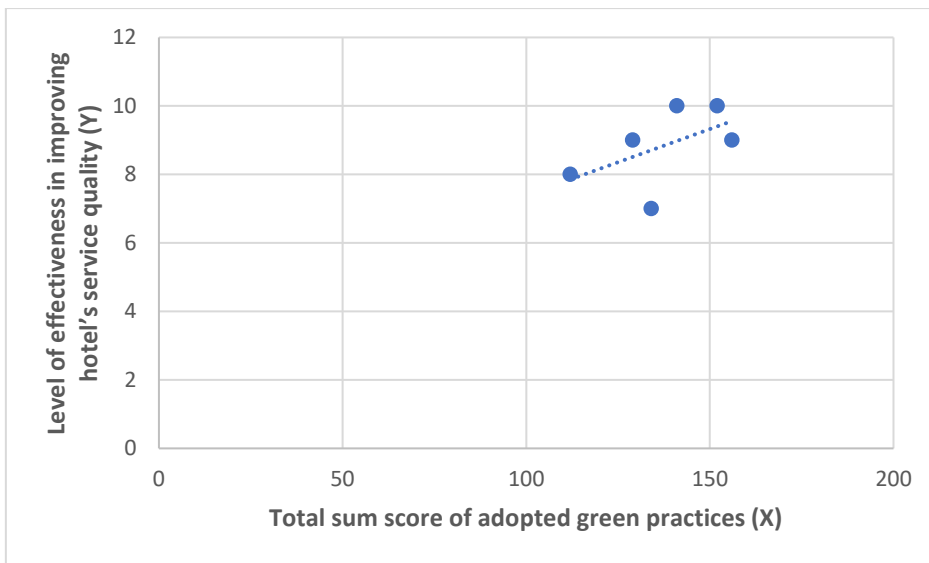
4.5.4 Hotel's service quality

Table 4.5.4: Hotels' service quality Pearson correlation coefficient table

Hotels	Total sum of adopted green practices (X)	Level of effectiveness in improving hotel's service quality (Y)	XY	X ²	Y ²
Hotel A	134	7	983	17956	49
Hotel B	112	8	896	12544	64
Hotel C	141	10	1410	19881	100
Hotel D	152	10	1520	23104	100
Hotel E	129	9	1161	16641	81
Hotel F	156	9	1404	24336	81
Total	824	53	7329	114462	475

Using the Pearson's correlation coefficient formula, $r = 50.333 / \sqrt{(1299.333)(6.833)}$, the result was an R value of 0.534. This demonstrates that the relationship between the two variables, the adoption of green practices in a hotel and the hotel's revenue and profitability has a positive correlation. As shown in Figure 4.5.4 below, the R value of 0.534 shows that the correlation between the variables is moderately positive.

Figure 4.5.4: Hotel service quality vs. Adoption of green practices



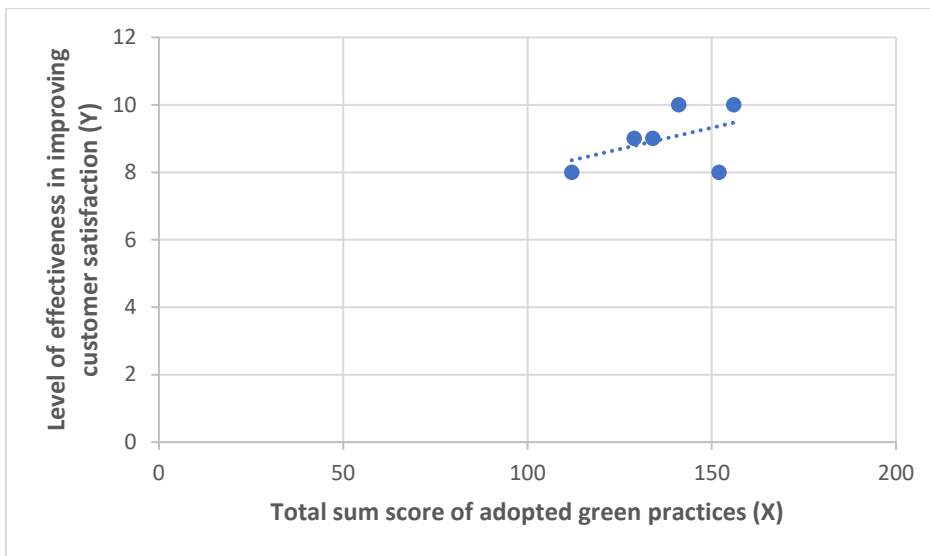
4.5.5 Customer satisfaction

Table 4.5.5: Customer satisfaction Pearson correlation coefficient table

Hotels	Total sum of score of adopted green practices (X)	Level of effectiveness in improving customer satisfaction (Y)	XY	X ²	Y ²
Hotel A	134	9	1206	17956	81
Hotel B	112	8	896	12544	64
Hotel C	141	10	1410	19881	100
Hotel D	152	8	1216	23104	64
Hotel E	129	9	1161	16641	81
Hotel F	156	10	1560	24336	100
Total	824	54	7449	114462	490

Using the Pearson's correlation coefficient formula, $33 / \sqrt{((1299.333)(4))}$, the data from the two variables resulted in a R value of 0.458. This proves that there is a positive correlation between the adoption of green practices in a hotel and the improvement in the hotel's customer satisfaction. Additionally, as illustrated in Figure 4.5.5, as the value is close to zero, it indicates a moderately positive relationship between the two variables.

Figure 4.5.5: Customer satisfaction vs. Adoption of green practices



4.6 Effectiveness of green practices on the operations of hotels

In the final section of the questionnaire, the hotel respondents were supposed to indicate the effectiveness that the green practices have had on their operation, ranging from extremely effective to not effective at all. There were four categories that were being used to determine the effectiveness of the green practices.

4.6.1 Effect on reduction of hotel's carbon footprint

The study sought to find out the extent of the effectiveness of the green practices on the reduction of the carbon footprint released by the hotel.

Table 4.6.1: Effect on reduction of hotel's carbon footprint

Effect on reduction of hotel's carbon footprint	Frequency	Percent (%)
Extremely effective	4	66.67
Very effective	2	33.33
Moderately effective	0	0.00
Slightly effective	0	0.00
Not effective at all	0	0.00
Total	6	100.00

From the findings, most of the respondents which were four (66.67%) described the green practices as extremely effective and two (33.33%) described it as very effective. From these findings, the effect that green practices have on the hotel is extremely effective in helping to reduce the hotel's carbon footprint.

4.6.2 Effect on reduction of total costs of running the hotel

The study sought to investigate the effect that green practices had on the reduction of total costs of running the hotel.

Table 4.6.2: Effect on reduction of total costs of running the hotel

Effect on reduction of total costs of running the hotel	Frequency	Percent (%)
Extremely effective	4	66.67
Very effective	1	16.67
Moderately effective	1	16.67
Slightly effective	0	0.00
Not effective at all	0	0.00
Total	6	100.00

From the findings, in terms of the effect on reduction of the total cost of running the hotel, four (66.67%) of the hotels found it extremely effective, while one (16.67%) found it very effective and another one (16.67%) finds it moderately effective. From these findings, it proves that green practices are extremely effective in reducing the total costs of running the hotel.

4.6.3 Effect on improving the hotel's status and rating

The study sought to examine the extent of effectiveness that green practices had on improving the hotel's status and ratings.

Table 4.6.3: Effect on improving the hotel's status and ratings

Effect on improving the hotel's status and ratings	Frequency	Percent (%)
Extremely effective	3	50.00
Very effective	2	33.33
Moderately effective	1	16.67
Slightly effective	0	0.00
Not effective at all	0	0.00
Total	6	100.00

From the findings, three (50.00%) indicated green practices are extremely effective, whereas two (33.33%) indicated that it was very effective and one (16.67%) indicated that it was moderately effective. This reflects that green practices are very effective in improving the hotel's status and ratings when utilized.

4.6.4 Effect on improving hotel's overall operating efficiency

The study sought to explore the extent of the effectiveness that the green practices had on the hotel's overall operating efficiency.

Table 4.6.4: Effect on improving the hotel's overall operating efficiency

Effect on improving the hotel's overall operating efficiency	Frequency	Percent (%)
Extremely effective	3	50.00
Very effective	2	33.33
Moderately effective	1	16.67
Slightly effective	0	0.00
Not effective at all	0	0.00
Total	6	100.00

From the findings, three (50.00%) of the responses described green practices as extremely effective, while two (33.33%) as moderately effective and one (16.67%) as moderately effective. This indicates that green practices are greatly effective in improving the hotel's overall operating efficiency.

CHAPTER FIVE: DISCUSSIONS

5.1 Introduction

This chapter presents the summary and discussions of the data findings on the effect of green practices on the operational efficiencies of 4-star and 5-star hotels in Nairobi. The main sections of the chapter include summary of findings, conclusions for each of the specific objectives, and recommendations for further research of the study.

5.2 Summary

The study sought to determine the summary of significant findings from the research. These will be highlighted below according to the specific objective.

5.2.1 Implementation of green practices by hotels

The summary of the research established that all the hotels sampled in the study had adopted green practices in their operations. This was evident as the data that was analysed showed that mean values for the responses from the hotel, fell between the ranges of 4.36-5.19 which is frequently, and 5.20-6.00 which is very frequently. In addition to this, the study revealed that the most frequently used and implemented green practices by 4-star and 5-star hotels in Nairobi included air quality management with a mean of 5.83, environmental purchasing with a mean of 5.67, permit maintenance with a mean of 5.50 and energy conservation with a mean of 5.40. The popularity of green practices implementation has become more popular in hotels, with more hotels adopting and implementing the environmentally friendlier practices.

5.2.2 Relationship between the adoption of green practices and performance of hotels

From data analysis on the relationship between the adoption of green practices and the performance of hotels, using Pearson's correlation, the study revealed that the adoption of green practices in hotels has a positive correlation with the hotel's performance. The R values from the analysis, were all between 0 and 1, which indicates a positive correlation between adoption of green practices and the performance variables. The strongest correlation relationship were between adoption of green practices and hotel's revenue and profitability which had an R value of 0.633, as well as adoption of green practices and hotel's service quality which had a R value of 0.534. The findings of this study concur with previous literature from Smith and Perks (2013) which evidenced a strong positive relationship between green practice implementation and business performance.

5.2.3 Effectiveness of green practices on the operation of hotels

The study revealed that green practices are effective in improving the operations of 4-star and 5-star hotels in Nairobi. On average, green practices were extremely effective in improving the hotel's status and ratings and the hotel's overall operating efficiency, as 50% of the hotels had given it that rating in both categories. For the other categories of reducing the hotel's carbon footprint and reduction of the total costs of running the hotel, more than 65% of the hotels stated that green practices were extremely effective in doing influencing that. The study findings are consistent with Kariuki and Stephen's (2014) literature which revealed that there is a positive significant relationship between the operational performance of hotels and green practices that have been employed by them.

5.3 Conclusion

According to the findings of the research, the researcher was able to draw the following conclusions for the study. The conclusions are expounded below based on the specific objectives of the study.

5.3.1 Implementation of green practices by hotels

Based on the findings on the implementation of green practices, the study concluded that green practices have been implemented to a very great extent by 4-star and 5-star hotels in Nairobi. Many of the hotels indicated that they used various green practices in and around their hotels frequently.

5.3.2 Relationship between the adoption of green practices and performance of hotels

Based on the findings on the relationship between the adoption of green practices and the performance of hotels, the study concluded that there is a positive correlation relationship between the two variables in 4-star and 5-star hotels in Nairobi. Therefore, as hotels increase their adoption and implementation of green practices in their establishment, this will in turn have an effect in their performance, which will also increase as well. On the other hand, if the hotel reduces the use of green practices, then this will also negatively affect the hotel's performance.

5.3.3 Effectiveness of green practices on the operation of hotels

Based on the findings on the effectiveness of green practices on the operations of hotels, the study found that green practices were very effective in improving the operations of 4-star and 5-star hotels in Nairobi. Green practices adopted by the hotels have been very effective in helping to improve their operations in various ways such as reducing the hotel's carbon footprint, reducing the total costs of running the hotel, improving the hotel's customer satisfaction, rating and status.

5.4 Recommendations

The study recommends that 4-star and 5-star hotels need to continue on their adoption and implementation of green practices in their operations. Green practices help to reduce the damage done to the environment by hotel operations, and instead helps hotels to be more sustainable in the way that they conduct business. The study also recommend hotels to improve on their green practices, as technology is advancing every day and new green practices are emerging which can be implemented into hotel operations. The researcher also recommends that hotel managers and directors continue to adopt green practices and have environmental policies to ensure that their hotel is being friendlier to the environment and operating in a way that gives back to the environment. They should also continue to empower and create awareness amongst their employees and guests on the importance of green practices, so as to create a habit of adopting green practices within the hotel, which will in turn improve the efficiency of the hotel's operations.

5.5 Suggestions for further studies

The researcher suggests that for future studies, a bigger population of hotels can be used. This to reveal if studying a bigger population size will yield different results from this study.

This is because this study was only looking at 4-star and 5-star hotels in Nairobi County. Future studies can replicate the study looking at all hotels in Nairobi or look at 4-star and 5-star hotels in other counties and compare the study findings.

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APPENDIX

Appendix 1: Letter of introduction

Shekinah Githinji

School of Tourism and Hospitality
Strathmore University
P.O BOX 59857-00200
Nairobi

16th February 2021.

Dear Sir/ Madam,

RE: RESEARCH PROJECT INFORMATION: THE EFFECT OF GREEN PRACTICES ON THE OPERATIONAL EFFICIENCY OF HOTELS IN NAIROBI

My name is Shekinah Githinji, a 4th year student at Strathmore University, pursuing a degree in Bachelor of Science in Hospitality Management. As a school policy, it is mandatory for all 4th year students to undertake a research project, which is a requirement for graduation. I am therefore doing a research project on 'The Effect Of Green Practices On The Operational Efficiency Of Hotels In Nairobi'.

I have chosen your institution as one of my sample studies and I highly appreciate your kind assistance in providing me with the relevant information pertaining to my research problem. Any information that is shared in the attached questionnaire will be treated with utmost confidentiality and will be used for nothing more than for academic purposes that have been initiated by the university. It will remain in our discretion and will not be given out to competitors.

Your valuable time and information put into this research will be highly appreciated.

Thank you very much.

Yours sincerely,

Shekinah Githinji

102559.

Appendix 2: Research Questionnaire

My name is Shekinah Githinji, a student at Strathmore University in my 4th year studying a Bachelor of Science in Hospitality Management. I am currently doing research on the effect of green practices on the operational efficiencies of hotels in Nairobi. Your response will help towards further insight and analysis towards fostering a more sustainable environmental impact for the hotels, in regard to green practices. All responses will be kept confidential. Participating in this questionnaire will only take about 5 - 10 minutes of your time. Your response and input will be highly appreciated, thank you.

Part A: Background Information

1. Respondent information - Kindly tick one box for each question that applies to you.

a) I am:

Male

Female

b) I am between the age of:

18 – 30 years

31-40 years

41-50 years

51-60 years

61-70 years

Above 70 years

c) Current position at hotel:

General manager

Departmental manager

Other (Kindly write the name) _____

2. Hotel information – Kindly fill in the appropriate answer and tick one box which applies to your hotel.

a) Hotel name: _____

b) Ownership of the hotel:

Independent hotel

Chain hotel

Franchise hotel

c) Star rating of hotel:

4-star

5-star

Part B: Green Practices

Kindly indicate how often your hotel participates in the following hotel green practices by ticking the most accurate and appropriate response. Tick only one answer for each statement describing the green practices in your establishment.

Hotel green practices	Very frequently	Frequently	Occasionally	Rarely	Very rarely	Never
1. Water management						
a. Monitoring and recording of the hotel’s total water consumption monitored on a monthly basis.						
b. Checking of taps and pipes for leaks on a regular basis.						
c. Implementing a guest linen and towel reuse program.						
d. Using water-efficient appliances, equipment and devices.						
e. Uses dual flush or low-flow toilets.						
f. Capturing and reusing rainwater for other hotel operation purposes.						
g. Treats wastewater for reuse in other hotel operation purposes.						
2. Energy conservation						
a. Monitoring and recording of the hotel’s total energy consumption monitored on a monthly basis.						
b. Using energy-efficient heating or cooling systems.						
c. Using energy-saving bulbs and lighting systems.						
d. Using energy-efficiency appliances, devices and equipment.						

e. Using occupancy key card plug in system for room electricity supply.						
f. Use timers, motion sensors to turn on/off lights.						
g. Using renewable source(s) of energy.						
3. Solid waste management						
a. Reusing materials such as papers, bottles and plastics.						
b. Sorting of waste into categories (eg: plastic, metal, paper) before disposal.						
4. Air quality management						
a. Inspection of ventilation systems.						
b. Indoor non-smoking policy.						
c. More than 75% of rooms are non-smoking.						
5. Environmental purchasing						
a. Purchasing locally produced food, supplies and materials.						
b. Purchasing eco-friendly or eco-label products and materials.						
6. Community awareness						
a. Informing guests on hotel green practices and environmental policies.						
b. Involving guests or the public in efforts to implement green practices in operations.						
c. Over the past 12 months, employee training on green practices in the hotel operations.						
d. Supporting environmental programs or initiatives.						

7. <u>Permit maintenance</u>						
a. Is your hotel certified by an environment eco-label or certification scheme?						

Part 3: Adoption of green practices and hotel performance

Kindly rate the average performance of your hotel after adoption of the green practices. On a scale of 1 to 10, where 1 means very poor and 10 means excellent, indicate your establishment's performance along the selected parameters.

Very poor Poor Fair Good Excellent

1 - 2	3 - 4	5 - 6	7 - 8	9 - 10
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<u>Performance measure</u>	<u>Your answer</u>
Hotel occupancy	
Hotel growth	
Hotel revenue & profitability	
Hotel service quality	
Customer satisfaction	

Part 4: Effect of green practices on operations

Kindly indicate how effective green practices have been on your hotel operations by ticking the most accurate and appropriate response. Tick only once per each effect.

Green practices have....	Extremely effective	Very effective	Moderately effective	Slightly effective	Not effective at all
Helped to reduce our hotel's carbon footprint					
Reduced the total cost of running the hotel					
Improved the hotel's status and rating					
Improved the hotel's overall operating efficiency					

Appendix 3: List of targeted hotels

- 1. Crowne Plaza Nairobi Airport – 5 stars**
- 2. The Sarova Stanley – 5 stars**
- 3. Sankara Nairobi – 5 stars**
- 4. The Boma Nairobi – 5 stars**
- 5. Hemingway’s Nairobi – 5 stars**
- 6. Villa Rosa Kempinski – 5 stars**
- 7. Eka Hotel – 4 stars**
- 8. Hilton Garden Inn Nairobi Airport – 4 stars**
- 9. City Lodge at Two Rivers – 4 stars**
- 10. Executive Residency by Best Western – 4 stars**
- 11. Crowne Plaza Upperhill – 4 stars**
- 12. Windsor Golf and Country Club – 4 stars**
- 13. Nairobi Safari Club – 4 stars**
- 14. Hilton Nairobi – 4 stars**
- 15. Sarova Panafric – 4 stars**
- 16. Ole Sereni Hotel – 4 stars**
- 17. Golden Tuip – 4 stars**
- 18. The Panari Hotel – 4 stars**
- 19. Fairview Hotel – 4 stars**