



Green Practices Among Hotels in the Sunyani Municipality of Ghana

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ABSTRACT

Greening in the hospitality sector are becoming more popular on a global scale. Going green have drawn the attention of both individuals and companies in recent times. Businesses, including hotels, are being urged to take accountability for their part in the environment's decline. This study sought to ascertain the degree to which hotels in the Sunyani Municipality had adopted sustainable initiatives. Data from forty (40) hotel managers in the Sunyani Municipality were gathered quantitatively using a simple random sampling and stratified procedure. In these surveyed hotels, the adoption of green practices is not governed by any policies, according to the findings. The element influencing the hotels to adopt and implement green initiatives was customer demand. Of all the green practises, managing liquid waste was the most often used. According to the study's findings, most hotels in the municipality contribute less to reducing the harmful effects on the environment. The implications are that there is the need for green management training which would help strengthen hotel employees' sustainability practices.



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1. INTRODUCTION

Due to the decline in environmental quality, environmental issues are gaining attention on a global scale. As a result of issues like global warming, air, water, and land degradation, more and more hotels throughout the world are starting to use ecologically friendly business

strategies (Leonidou, 2013). Teng, Wu, and Liu (2015), highlighted that initiatives motivating hotel managers to conserve resources like water and energy while also lowering their operational expenses and safeguarding the environment is referred as green practice. A “green practice” are eco-friendly approaches that are established and executed in minimising wastage (water, energy).

While the service industry particularly the hospitality sector continues to grow in importance in contributing to GDP in various countries, it cannot escape from its responsibility for contributing to environmental degradation and climate change (Kasim, 2009). The sector can have an impact on the planet in a number of ways, including the excessive use of “natural resource”, infrastructure building and tourist visits (Robinot & Giannelloni, 2010). Since the hotel sector uses a lot of resources, green methods must be used by these businesses to prevent the destruction of the environment. For sustainability, the hospitality sector across the globe is beginning to incorporate green practises into the majority of their operations.

Additionally, it has been noted that travellers (business and leisure) are increasing becoming aware of environmental issues of places they travel to, that is; if intended destination is environmentally friendly (Sara & Ragan, 2013). Environmental concerns in the hotel industry include waste recycling, energy and water conservation among others (Mensah, 2006). As guests become more conscious of environmental deterioration and overconsumption of resources such as commodities, energy, and water, they are becoming more interested in staying in “green” hotels (Han et al., 2010). Authorities and tourism stakeholders are now under increasing pressure to encourage eco-friendly practices and green products and services in hotels as a result of hotels’ negative environmental impact (Moreo, 2008). To become “eco-friendly hotels or green hotels, lodging facilities must demonstrate responsible behaviour, such as water and energy-saving and waste reduction, in order to become green hotels” (Manaktola & Jauhari, 2007.pg.17).

The goal of becoming green is to use technologies that will not destroy the environment by causing pollution or exhausting natural resources. Numerous advantages have been identified as a result of the adoption of green practises, according to studies that have been conducted such as financial gain, acquiring a competitive edge, increasing brand value, and winning over customers' loyalty among others (Mbasera, Du Plessis, Saayman & Kruger, 2016; Dodds, 2008).

In Africa, a study conducted in Zimbabwe by Mbasera, Du Plessis, Saayman & Kruger, (2016), indicated that there appears to be no existing legislation regulating hotels to implement environmentally friendly practices (Maphosa, 1997). In a study on a sustainable wastewater management strategy by Nhapi and Gijzen, (2005) in Zimbabwe, findings revealed a lack of understanding of environmental resource management. Researchers discovered that many South African hotels do not engage in eco practices because no regulations or legislation are forced (Van der Merwe & Wocke, 2007). Top management's vision and individual hotel managers both have a role in motivating hotels to implement green practices (Rogerson & Sims, 2012). Spenceley, (2005), highlighted that policies, programmes, and regulations for eco practices in hotels in Southern part of Africa is in a fragmented manner, which is cause for concern.

In Ghana, some studies have been done by Mensah, (Mesah, 2006, 2008, and 2012) in Accra but few or none in the hotels sector in the Sunyani municipality. To meet the global market from guests for eco lodgings, green management rules and regulations need to be made and put into

place. The study is crucial because customers are more informed of the need for hotels to go green and hoteliers cannot afford to remain unconcerned. As a result, baseline data on eco-friendly hotel practises in the Sunyani municipality are required in order to create an environmental management programme for the industry. Hence, this study seeks to fill in this gap. Specifically, the study sought to:

1. To ascertain the degree to which hotels in the Sunyani municipality have adopted green practices.
2. To examine influential factors in the adoption of green practices among hotels in the Sunyani municipality.

2. LITERATURE REVIEW

2.1 Green practices

Green practices is about utilizing goods and techniques in a green way prevents pollution and the depletion of natural resources from having a detrimental influence on the environment (Perks, 2010). Environmental management can be thought of as an ongoing process that is implemented through management decisions. It involves monitoring a hotel's operations and developing appropriate plans and activities to lessen any adverse environmental effects (Mensah, 2006). Hotels have a significant environmental impact, contributing to a variety of global issues, the most significant of which is climate change (Bahadanowcz et al., 2011). Hotel activities generate greenhouse gas emissions, including CO₂ and chlorofluorocarbon (CFC), which are harmful to the environment and human health (Verginis & Wood, 1999). Hotels have been demonstrated to have the greatest adverse effects on the environment of all commercial structures (Rogerson & Sims, 2012). According to estimates, a typical hotel emits "between 160 and 200 kilogrammes of CO₂ per square metre of room floor space per year, and the average five-star hotel's water use per guest per night is between 170 and 440 litres" (Andrea, 2007.pg.17).

This study defines green practises as internal actions carried out by a specific hotel with the intention of implementing eco-friendly practises in order to become a green facility to maximise profit. The study examined five environmentally friendly behaviours: controlling liquid waste; solid waste; green energy use and efficiency; air quality; and environmental purchasing.

2.2 Liquid waste management

Water is extremely vital in the accommodation sector. Water management entails storing wastewater for various purposes and lowering water consumption (Tang, 2012). Water is utilised in hotels on a daily basis for cleaning, cooking, and drinking. The average water usage pattern of hotel visitors is estimated to be around 170-500 litres per day (Mungai & Urungu, 2013). According to research, green hotel activities include the deployment of water conservation techniques (Rogerson, 2012). "The use of water-efficient devices such as low-flow or infrared-activated faucets, low-flow showerheads, low-water-volume toilets, sink aerators, regular fixing of toilet and bath leaks are examples of these measures" (Hsiesh, 2012. pg.28). By collecting rainwater and using it to flush toilets, hotels can keep their operations waste-free (Moreo, 2008). Harju, (2012) in his study indicated that waste water treatment necessitated a high level of

technical expertise. Given the absence of relevant knowledge, this may be the main cause of certain hotels' poor performance in the field of water recycling and reuse and expertise.

2.3 *Solid waste management*

Hotels are regarded as an important part of the hospitality and tourism industry, as well as a major supplier of garbage (Molina-Azorn, Claver-Cortés, Pereira-Moliner & Tar 2009). Waste management is a comprehensive approach to waste prevention that involves a wide range of solutions for waste management that are environmentally responsible, commercially viable, and ethically acceptable (McDougal, et al., 2001). A hotel that implements a solid waste minimisation programme can save money on garbage transportation fees while also being more ecologically friendly. This is becoming more and more the case as landfill costs increase and solid waste is recognised as a severe environmental problem (Moreo, 2008). Dealing with food waste is an additional component of a solid reduction and recycling approach as well as table leftovers, cooking losses, and packing mistakes that cause food waste to build up.

2.4 *Green energy consumption and efficiency*

The functioning of a hotel necessitates the use of energy for effective operation (Bohdanowicz, 2006). In light of this, energy conservation has long been regarded very important aspects of sustainability in the hotel sector, because these facilities use a lot of power for various operating purposes (Kasim, 2017). Alternative energy sources, such as renewables, are critical, resulting in a shift in energy supply to more sustainable solutions. “Implementing renewable energy programmes such as the use of wind and solar power, adoption of automated energy control systems, installation of energy-efficient laundry equipment, use of digital thermostats to control guestroom energy consumption, and installation of occupancy sensors (which automatically turn the lights off when guests leave the room)” are energy management practices’ highlighted by Gise, (2009. Pg.12). Green hotels use energy-saving methods such as use of energy saving bulbs to make their hotels more energy-efficient (Hsieh, 2012). This way, less energy is consumed.

2.5 *Air quality management*

As the hotel sector grows more competitive, hotel expansion is becoming the order of the day. This raises awareness of the damaging effects on air quality (Cascardo, 2007). In order to improve air quality in hotel rooms, it is strongly suggested that ecologically friendly and non-toxic cleaning chemicals be used, particularly in housekeeping. Indoor air quality is defined by the US Environmental Protection Agency (EPA) (2009.pg.57) as “the quality of air inside buildings in terms of pollutant concentrations and thermal conditions that affect the guest's health, comfort, and performance”. Energy efficiency and environmental measures (clean air) are related and this can lower the risk of health-related liability while also improving employee and guest interactions.

Chlorofluorocarbons, for example, are an ozone-depleting substance that can release toxic air pollutants through poorly maintained heating, ventilation, and air conditioning (HVAC) devices in lodging establishments (Suttell, 2005). Controlling air quality in lodging facilities is primarily motivated by concerns about human health. Non-smoking policies are the most

common focus of green practices for air quality. The well-being of guests and employees is the motive behind no-smoking regulations (U.S. EPA, 2009).

2.6 Green purchasing

Green purchasing is described as an eco-responsible method of buying that is more environmentally friendly and promotes recycling and reuse of materials while maintaining the performance standards for the products (Millar, Mayer & Baloglu, 2012). The biggest impediment to effective green purchasing is the high cost of environmental programmes. It is preferable to utilise paper created from recycled items rather than plastic-based packaging, which is very polluting (Allen, 2007). According to Moreo, (2008), hotels should acquire locally cultivated food since it is fresh, indigenous, and emblematic of the place, thus avoiding financial leakages in hotels and helping the local economy to the greatest extent possible.

It's also crucial that purchases are made from vendor who exclusively offers items that encourage environmental sustainability, social justice, and fair-trade ideals (Allen, 20012). Green shopping from environmentally friendly suppliers is also suggested (Millar, Mayer & Baloglu, 2012). Regarding guest rooms and food and beverage outlets, hotels can purchase regenerated sustainable and environment packaging including take-out containers, papers, cleaning supplies, and other goods made from previously recycled bio-based (Timothy & Teye, 2009).

3. CURRENT SITUATION IN THE SUNYANI MUNICIPALITY

Currently, increased energy demand, a greater strain on the treatment of solid waste and industrial discharges into land and air are only a few of the numerous severe environmental consequences of the hotel sector. As a result of these implications, the protracted repercussions of such negative environmental influences, notably those connected to global climate change, are quite unknown (Rogerson & Sims 2012). Hence, the need for this study. Hotels in the Sunyani municipality lacks data on their green management activities, yet a wide range of environmental effects have advised that rapid action is necessary to mitigate these impacts. Hotels in the Sunyani municipality are witnessing a lack of coordination in the development, formulation, and implementation of green management strategies and this should be a matter of concern. In order to meet the growing demand from guests for more environmentally friendly lodgings, green management rules and regulations (policies) need to be made and put into place.

4. INFLUENTIAL FACTORS IN ADOPTING GREENING

This study employed four factors influencing green practices: “government regulation and policy, customer demand, level of competition and attitude toward change”. Because they are commonly employed in other sustainability studies, these are determined to be key drivers of environmental management practices.

4.1. Government regulation and policy

Regulation, according to Al-Shourah, (2007), is a system that are upheld by the regulatory agencies of a region or nation. Laws pertaining to environmental protection, control legislation, business suspensions, and penalties are all part. Policies have a significant effect on how green innovation practises are applied (Tar et al., 2009). The circumstances that these

various justifications seek to explain why businesses adopt activities that go beyond regulatory compliance are yet unknown, (Delmas & Toffel, 2004).

4.2. Customer demand

Specification of particular green standards in products and services by purchasing firms or individuals is termed customer demand (Eltayeb, Zailani & Jayaraman, 2010). Customer demand is viewed as the expectations, needs, and guidelines that are set by a company's direct clientele and are to be adhered to by the organisation in the development of its products (Christmann & Taylor, 2001). Customer demand significantly improves environmental management, according to prior studies (Le et al., 2006). Serlen, (2008) backed up this claim by claiming that consumers felt more responsible for conserving and caring for the environment and that their environmentally friendly views are closely linked to their positive intent to purchase green products and services at a premiums.

4.3. Level of competition

Competition viewed as a situation where the intensity of rivalry may be high due to a large number of market competitors and the absence or availability of opportunities for future expansion can be difficult because of the large number of market competitors and the absence or availability of opportunities for future expansion (Jaworski & Kohli, 1996). According to a study, competition increases the likelihood of being creative and innovative in terms of environmental effects (Sigala, 2006). Competition pressure boosts adoption rates and demand for new technologies, resulting in increasing environmental unpredictability.

4.4. Attitude towards change

According to Le et al. (2006), attitudes toward change are the behaviours that potential adopters regard as novel. Hurley and Hult (1998) indicated that the ability of a business to enter inventive emerging markets with new or current services in which it may implement innovative solutions is termed as its attitude toward change. According to Le et al. (2006), the most notable finding was a favourable relationship between an organization's attitude toward change and environmental management techniques. When resources are available, Organizations with innovative cultures are more likely to use innovations more frequently and acquire a competitive advantage (Hurley & Hult, 1998).

According to Gifford, (2008), environmental attitudes is “an individual’s concern for physical environment as something that is worthy of protection, understanding or enhancement”. It is common to predict environmentally friendly behaviour using attitudes (Laroche et al., 2001). Hotel employees attitudes toward change and green practises and organisational factors like size, location, and financial situation all have a significant impact on how concerned they are about the environment and how willing they are to take action (Bohdanowicz, 2005; Le et al., 2006).

4.5. Theories underpinning the study

This study applied the “resource-based theory, the institutional theory, and the theory of planned behaviour”. According to the “resource-based theory” a company is defined as a huge group of resources that utilise and store diverse and immobile resources. Offering insightful

information on the advantages to an organization's ability to compete by increasing its environmental commitment. Businesses function within a societal context of norms, values, and implicit judgments about what underpins or accepts economic behaviour from an institutional standpoint, meaning that human behaviour is motivated by social justification and social obligation in addition to economic optimization. This is the outcome of a company's development of competitive competencies. A wide spectrum of human behaviours can be accurately predicted by the "Theory of Planned Behavior (TPB)", utilizing high predictive value (Aragon-Correa & Sharma, 2003). The desire of an individual to engage in a certain behaviour is an essential feature of the concept of planned behaviour, as it was in the original theory of reasoned action. The motivating factors that affect behaviour are expected to be captured by intentions, which are measures of how much effort "people are willing" to put forth to carry out the intended behaviour.

5. METHODOLOGY

5.1. Study area

The Bono region is one of the sixteen (16) administrative regions of Ghana with twelve (12) districts and Sunyani as its regional capital also known as green city of Ghana. Sunyani can pride itself as the cleanest capital city with a major conference destination with hotels springing up. Sunyani is surrounded by mining communities, cocoa and timber farms as well as tourist destinations, making the region a hub for tourist and investors. Their distinctive tourist attractions draw visitors from far and near. The region is a stopover for visitors from the south and the north. The region's tourism commercialization has increased the demand for accommodation. As a result, many hotels, guesthouses, and budget hotels have sprung up to fulfil the increased demand for lodging. The study location was chosen because there is a serious demand for accommodation by travellers, both leisure and business within the region. Figure 1 represents the map of the study area.

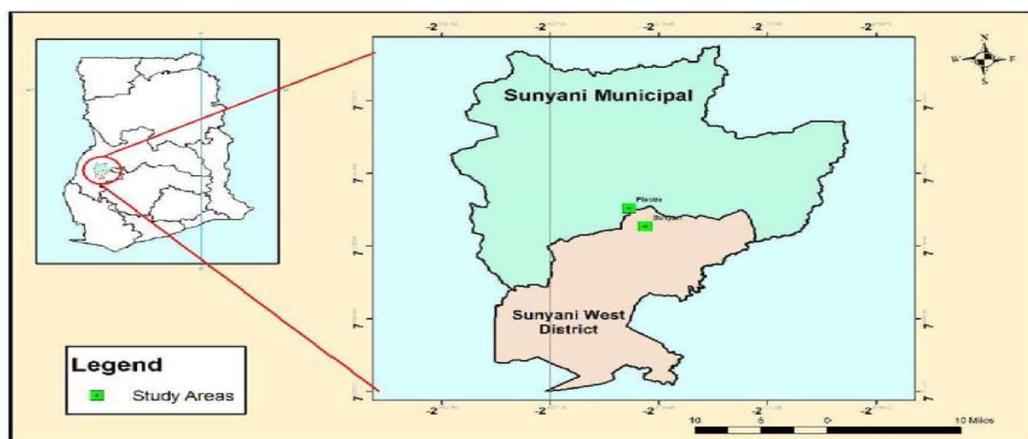


Figure 1. Map of the Sunyani Municipality.
Source: Foli et al. (2020).

5.2. Research design and paradigm

A descriptive research design was used for this investigation. A descriptive survey is a quantitative research method that seeks to collect measurable data for statistical analysis of the sample (Creswell & Creswell, 2018). According to the positivist view, the reality is constant and unaffected by the thing being examined, therefore it can be observed and explained objectively (Oberiri, 2017). As a result, the green practices study is based on a quantitative method-based post-positive paradigm. The quantitative research method was used in the investigation.

5.3. Population and methods (sampling, sample size)

The target population of this present study encompassed hotels managers within the Sunyani municipality. Data from GTA (2019) shows that 74 registered hotels are situated within the Sunyani municipality, consisting of 1 star, 2 star, 3 star, and budget hotels. The study used simple random sampling and stratified technique. This sampling approach was used for the investigation because the study population and sample frame were known. Thus, all units within the sample population had an equal probability of being chosen. A sample is a subset of a population used to assess the population's parameter. It is also the total number of elements, cases, or participants in a study (Agarwal, et al., 2021; Malhotra, 2010). The hotel managers (n = 50) were chosen using stratified random sampling. The GTA's hotel classification system served as the stratum criterion. The strata were three-star, two-star, one-star and budget.

5.4. Instrumentation, design and application

The questionnaire was the primary tool used to collect data from respondents. The data was gathered by distributing surveys directly to hotel managers. The questionnaires are divided into three modules. The first section described the background characteristics of respondents such as gender, age, educational background etc. Section two documented hotel characteristics such as ownership type, number of rooms, years of operation etc. Section three highlighted hotel green practices including environmental policies and practices in their facilities.

Fieldwork began in May, 2020 and lasted two months. Every day, we called randomly chosen hotels. Some hotel managers self-completed questionnaires. Some hoteliers refused to cooperate. Others accepted the questionnaires, but collecting the completed ones was difficult. This was not only time-consuming but also costly. For the sample size of 50 managers, extra questionnaires were printed and managers from other hotels in the same category were chosen at random. Out of the total of 50 hotels sampled based on stratified sampling technique, 40 hotels returned their questionnaires for analysis.

5.5. Ethical consideration

Any scientific activity relies on the ethical elements of any study, as well as how they are discussed. This study took informed permission, anonymity, and secrecy into account. According to Neuman (2014), researchers should not put participants under undue pressure to engage in experiments. Prior to this study, informed permission was sought from respondents. They were explicitly informed of the study's goal, and those who refused to participate were not pressured into doing so. Respondents' anonymity was ensured because their names and other personal information were not linked to the individual responses provided. Neuman (2014) proposed that

even if a researcher cannot guarantee privacy, he or she should nonetheless maintain the confidentiality of the participants. Respondents were assured of their privacy because this exercise is purely academic.

6. RESULTS AND DISCUSSIONS

6.1 Socio-Demographic characteristics of respondent

Analysis of the field data was carried out using Statistical Package and Service Solution (SPSS) software version 21. This was encoded and entered into the SPSS software for further analysis and interpretation. This data was however, meticulously adjusted in order to exclude any outliers that could have jeopardised the validity of the findings. Descriptive statistics and factor analysis were used to present results. Results of this study indicated that the highest age range of respondents is 31-40 years representing 42.0% whereas 51 and above recorded the least representing 17.5% of the total respondent. More males were recorded 65% against 35% for females. Marital status recorded 70% married and work status 62.5% fulltime workers of the total respondent. With respect to the level of education of the respondents, more (72.5%) had their tertiary education. This implies that there are more males managers in the hotel industry in Sunyani as compared to their female counterparts, who are between the ages of 31-40 and majority of them are married and also are employed on full time basis. This information is represented in Table 1 Socio-Demographic Characteristics of Respondent (N=40).

Table 1. Socio-Demographic Characteristics of Respondent (N = 40).

Demographics	Categories	Frequency	Percentage (%)
<i>Age</i>	Below 30	8	20.0
	31-40	17	42.5
	41-50	8	20.0
	51 and above	7	17.5
<i>Gender</i>	Male	26	65
	Female	14	35
<i>Marital status</i>	Single	12	30.0
	Married	28	70.0
<i>Work status</i>	Fulltime	25	62.5
	Casual	15	37.5
<i>Status</i>	Proprietor	7	17.5

	General manager	17	42.5
	Manager	16	40.0
<i>Level of education</i>	SHS	11	27.5
	Tertiary	29	72.5
<i>Years of service in this hotel</i>	Less than 1 year	4	10.0
	1-3 years	12	30.0
	4-6 years	13	32.5
	More than 6 years	11	27.5
<i>Years of service in the hotel/ hospitality industry</i>	Less than 1 year	4	10.0
	1-3 years	6	15.0
	4-6 years	14	35.0
	More than 6 years	16	40.0

Source: Field survey, (2020).

6.2. Hotel characteristics

The study sought some information about the hotels in the Sunyani municipality. From table 2, Hotels that have been operating between 6-10 years, represents 67.5% of the total sample size while hotels operating above 20 years representing 5% of the total sample. The highest number of rooms ranged from 11-20 which constitute 45% compared to 50 rooms representing 5%. From the survey, majority (72.5%) of the respondents were from the budget hotels and the least hotel rated 3-star represents 2.5% of the total sample size. Most hotels were proprietorship owned representing 55.0% whilst limited liability hotels were made up of 45.0% of the total sample size. This means the municipality has more budget hotels with rooms ranging 11-20 and these hotels are individually owned and has been in operation between 6 – 10 years. The municipality is lacking 5 -4 star rated hotels and also multinational hotels as compared to other regions like Kumasi and Accra. Table 2 represent Hotel Characteristics (N=40).

Table 2. Hotel Characteristics (N = 40).

Hotel characteristics	Categories	Frequency	Percentage (%)
<i>Number of years in operation</i>	Under 5 years	3	7.5
	6-10	27	67.5

	11-15	8	20.0
	Over 21 years	2	5.0
<i>Number of rooms available</i>	0-10 rooms	13	32.5
	11-20 rooms	18	45.0
	21-30 rooms	5	12.5
	31-50 rooms	2	5.0
	Over 51 rooms	2	5.0
<i>Classification of the hotel</i>	3-star	1	2.5
	2-star	4	10.0
	1-star	6	15.0
	Budget	29	72.5
<i>Type of ownership</i>	Sole proprietorship	22	55.0
	Limited Liability	18	45.0

Source: Field survey (2020).

6.3. HOTEL GREEN PRACTICES

6.3.1. Environmental management policy

The first objective of the study was to identify green practices adopted among hotels in the Sunyani Municipality. The information is represented in percentage in Figure 2. The pie chart showed 22% of the hotels in the study area indicated they have an environmental management policy while majority (78%) of the hotels do not have any environmental management policy. It is observed that the high graded hotels are the ones having policies as compared to the budget hotels but the question here is, is it really working effectively with those hotels having these policies? This is in line with the research by (Mbasera, Plessis, Saayman & Kruger, 2016) who highlighted that without the direction of a policy, the execution of green projects is done haphazardly. Hsieh (2012, Pg.105) argues that “a green management policy is a top management’s declaration of its commitment to the environment”.

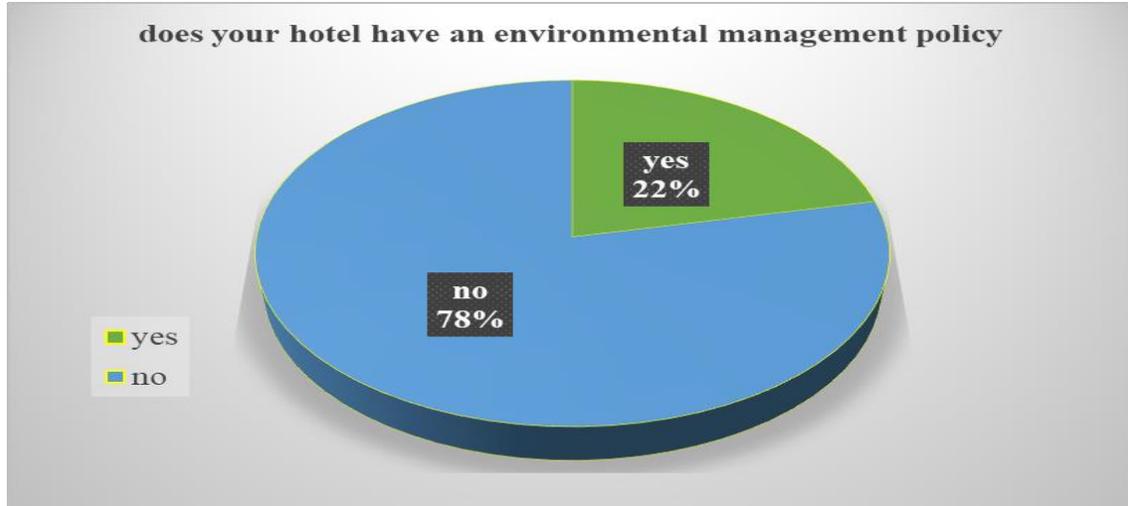


Figure 2. Pie chart showing an environmental management policy.
Source: Field survey (2020).

6.3.2. Liquid waste management

It is evidence from Figure 3 that 57.5% of hotels in the municipality employ liquid waste management to a large extent while 20% employ it to a moderate extent and 22.5% employ water and liquid waste management to a small extent. Most of the hotels had water collecting ducts that stored rain water and was used for irrigation and other purposes. The study demonstrates that while hotels make significant efforts to conserve water, they have very subpar practises for recycling and water reuse. Previous research particularly that of Harju, (2012), conform to this present study that, waste water treatment necessitated a high level of technical expertise. This might be the primary reason why some hotels in the municipality is performing poorly in the area of water recycling and re-use without the necessary information and expertise.

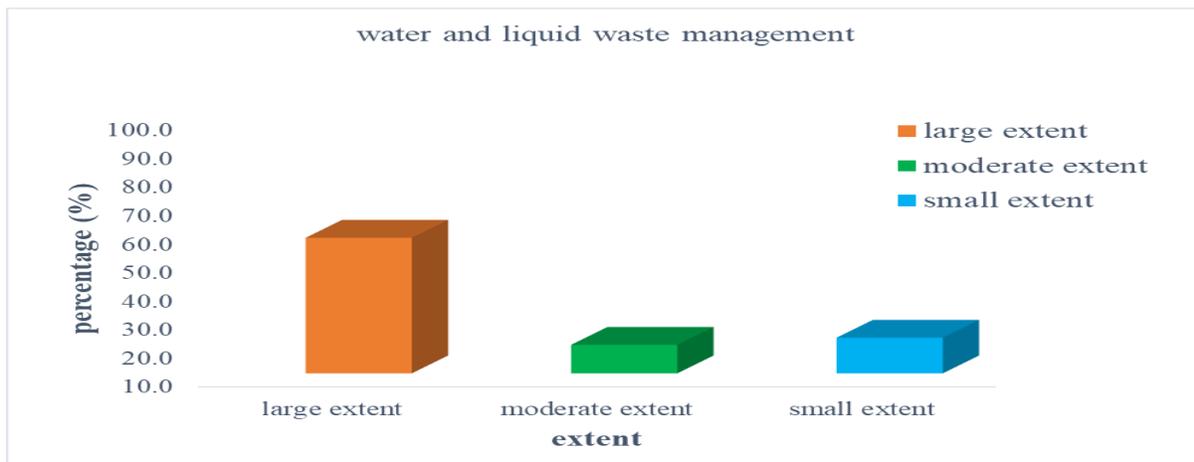


Figure 3. Bar chart showing water and liquid waste management.
Source: Field survey (2020).

6.3.3. Solid waste management

The extent to which the hotels in the Sunyani municipality employ solid waste management is highlighted in Figure 4 shows. It is vividly seen that, 65% of the hotels employ solid waste management to a large extent while 5% employ it to a moderate extent and 30% employ solid waste management to a small extent. Hotels in the Sunyani municipality had much knowledge on solid waste management as compared to the other green practices. This ascertains to the fact that solid waste management is of great concern to hotels in the municipality. Hotels have adopted practises to reduce solid waste, which is encouraging in terms of green practises, and they also have friendly disposal methods. However, the reusing and recycling of solid garbage in their hotels is quite unsatisfactory. Some earlier studies have agreed with this, particularly on solid waste recycling (Cohen, 2006). Some operators are uninterested in decreasing and recovering waste.

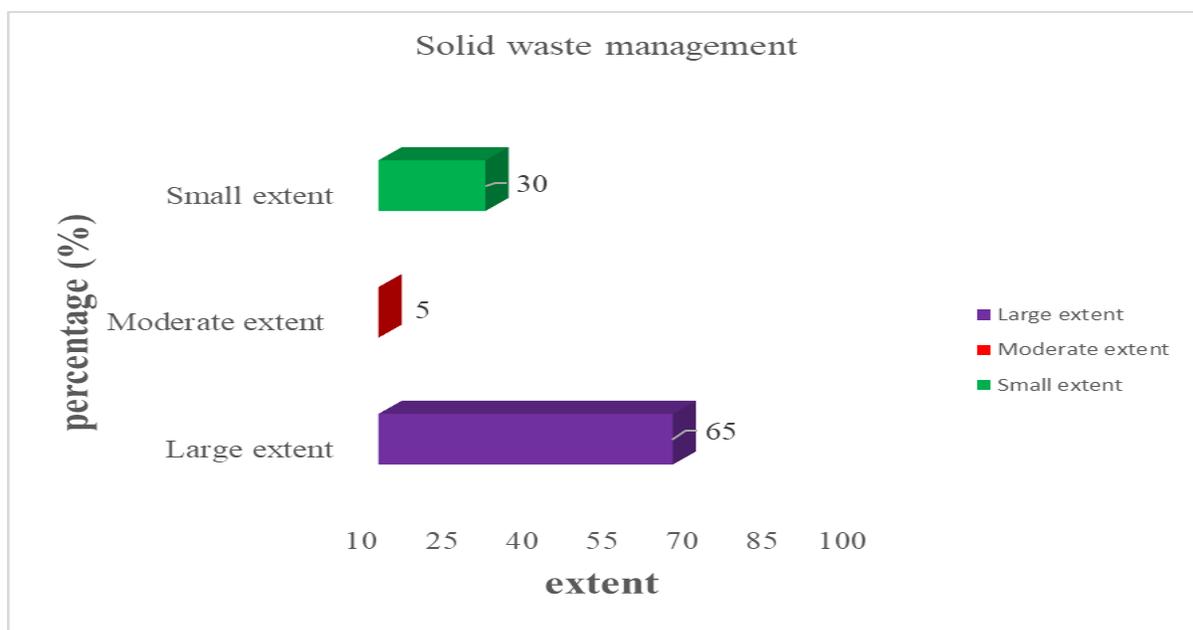


Figure 4. Bar chart showing solid waste management.
Source: Field survey (2020).

6.3.4. Green energy consumption and efficiency

The pie chart showed in Figure 5 indicates the extent to which the hotels in the Sunyani municipality employ green energy consumption and efficiency. From the study, 32% of the hotels employ green energy consumption and efficiency to a large extent while 28% employ it to a moderate extent and 40% employ green energy consumption and efficiency to a small extent. Some of the star rated hotels had solar panels installed while others used energy saving bulbs and used power saving appliances. The study reveals that some of the hotels in Sunyani are trying to save energy which is in line with Dutta (2008) study on measures in saving energy. This contradicts Mensah, (2006) finding which reveals that the studied hotels in the GAR know much about energy management and efficiency than any other green practice. Renewable technologies help to reduce carbon emissions. Odeku (2018), stressed in his study that “switching to the use

of renewable energy as an energy source is the perfect solution to save the earth's biosphere and is essential to the stabilization of the climate worldwide”.

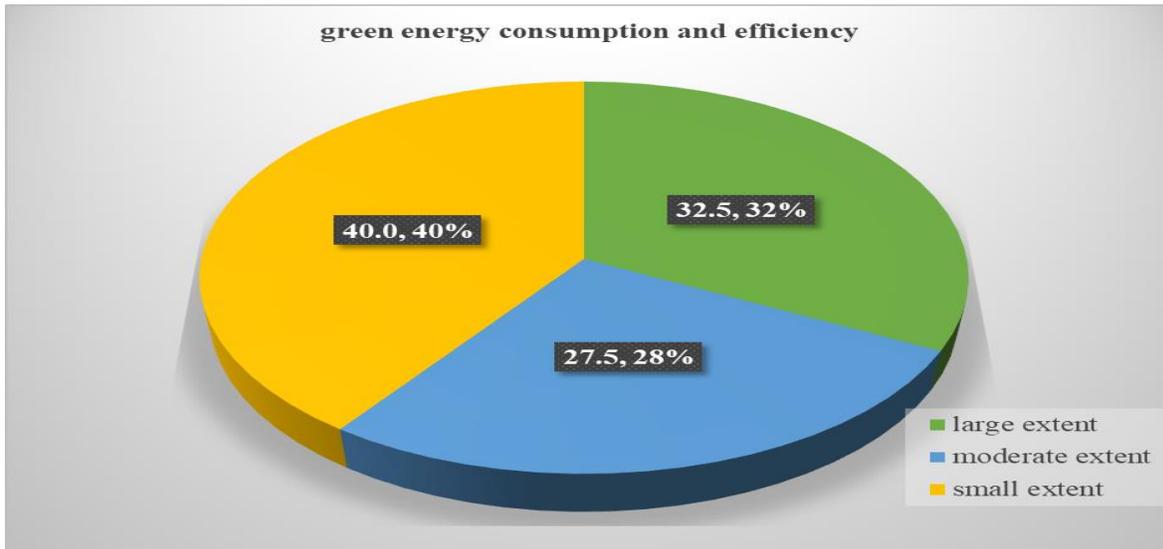


Figure 5. Bar chart showing green energy consumption and efficiency.
Source: Field survey (2020).

6.3.5. Air quality management

It is showed in Figure 6 that, 25% of the hotels employ air quality management to a large extent whiles 22.5% employ it to a moderate extent and 52.5% employ air quality management to a small extent. One of the least adopted variable is the air quality management. In this category, Sunyani hotels have been slow to implement this green practise. This indicates a low-level knowledge on this particular green practise adoption. Previous research, particularly by Emblem and Hewett in 2001, demonstrated that "air quality" has received attention in the hotel business. According to the findings of this study, hotels in the Sunyani municipality showed limited involvement in "air quality" regulation.

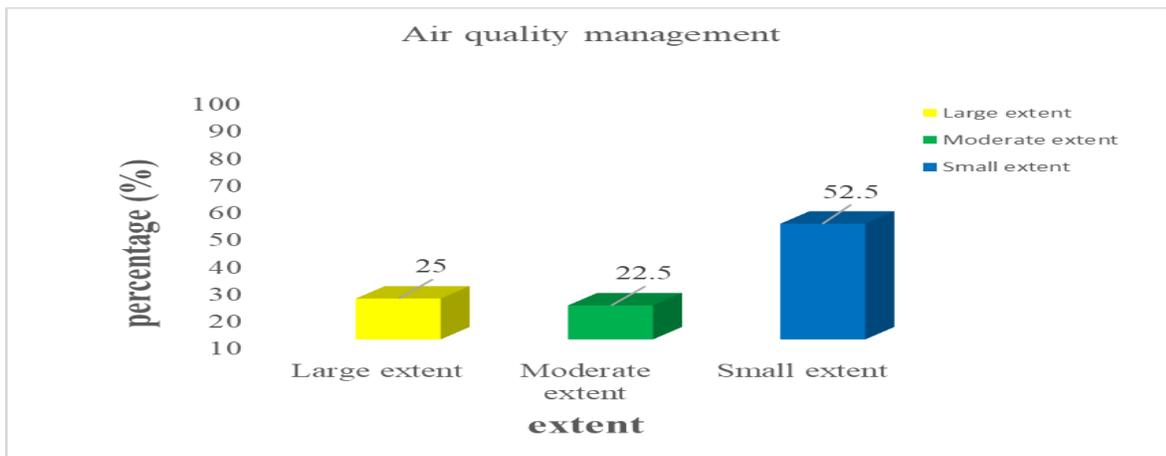


Figure 6. A bar chart showing air quality management.
Source: Field survey (2020).

6.3.6. Environmental purchasing

From the chart in Figure 7, 17.5% of the hotels employ environmental purchasing to a large extent while 32.5% employ it to a moderate extent and 50% employ environmental purchasing to a small extent. Environmental purchasing was the worst adopted known green practice of the hotels studied. “Hotels can acquire recycled eco-friendly packaging such as take-out boxes and bags, stationery, toilet paper, and other items created from previously recycled biodegradable packaging for their guest rooms, administrative offices, and kitchens” (Timothy & Teye, 2009.pg. 67). There is the need for more training to strengthen hotel manager’s knowledge on environmental purchasing in the municipality.

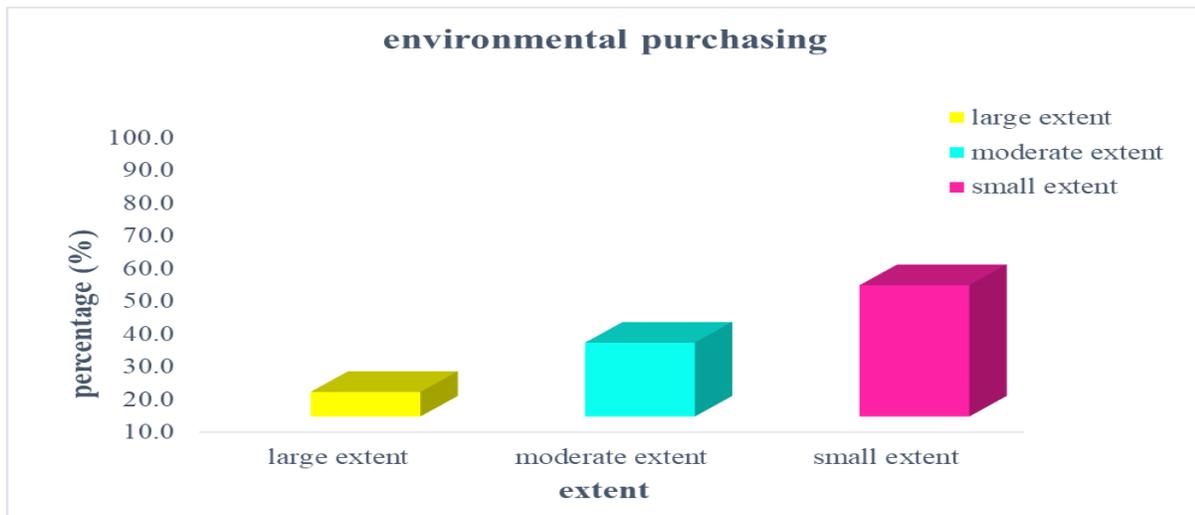


Figure 7: Bar chart showing environmental purchasing.

Source: Field survey (2020).

7. FACTORS THAT INFLUENCE THE ADOPTION AND IMPLEMENTATION OF GREEN PRACTICES

The study also sought to determine factors influencing green practices among hotels in the Sunyani municipality. This information is represented on the Table 3. Customer demand came out as the most pressing factor that influenced the hotels to go green with 65.8%. According to earlier studies, consumer demand significantly improves green practises (Le et al., 2006; Delmas & Toffel, 2004). Serlen, (2008) provided evidence to support this idea by pointing out that consumers felt more responsible for protecting and caring for the environment, and that customers' environmental attitudes are closely correlated with their readiness for extra fee payment for green purchases. According to Butler (2008), many hotel operators hold off on implementing green measures until consumer demand grows and operating expenses decline.

More so, government regulation and policy recorded 45.6% as the second influential factor in going green in the Sunyani municipality. According to "institutional theory" regulatory systems are the ones to apply pressure on businesses or provide motivations for firms to adopt specified actions (Scott, 2004; Scott, 2003). Research reveals that regulation have a major impact

on the implementation of green practises by businesses (Tar, et al., 2009; Darnall, eta l., 2008; Le, et al., 2006; Delmas & Toffel, 2004).

Furthermore, the third factor was attitude towards change with a percentage of 35%. Businesses exhibiting stronger innovation are productive and are able to adjust in contemporary settings by developing competencies leading to positive outcomes. According to Le et al. (2006), one of the most important correlations was a support for environmental management strategies and organisational receptivity to change. Hurley and Hult (1998) highlighted that, there is the need for market performance strategies to place more focus on a willingness to adapt than on learning as the main market response strategy. This is where the theory of planned behaviour come into play. The motivating factors that affect behaviour are expected to be captured by intentions, which measures how much effort “people are willing” to put forth to carry out the intended behaviour.

Finally, level of competition recorded 21.6% as the least factor. When competition intensifies, Businesses adapt by taking calculated risks and taking proactive measures that include research and adventurous learning in order to avoid engaging in pricing or promotion wars. According to empirical data, competition increases the possibility that innovations will be adopted when taking environmental factors into account (Sigala, 2006). Competition raises environmental unpredictability and both the necessity for and the rate at which innovation is adopted. As a result, managers who perceive a higher amount of competition will practice greening to gain a large market as compared to those who do not practice it (Sigala, 2006). Table 3 represents Factors Influencing the Adoption and Implementation of Green Practices in the Sunyani municipality.

Table 3. Factors influencing the adoption and implementation of green practices.

Factors	N	Percentage (%)	Mean	Standard Deviation
<i>i. Government regulations and policy</i>				
Change in laws on pricing is expected	40	47.5	1.7000	.75786
Change in policies on service standard or quality is predictable	40	37.5	2.0750	.91672
Governmental regulation or policy changes have effect on marketing and distribution systems	40	55.0	1.6250	.77418
Environmental standards frequently receive new rules and legislation from regulatory agencies.	40	42.5	1.7500	.74248
		45.625	1.7875	
<i>ii. Attitude towards change</i>				

In our hotel, technical innovation that is founded on research findings is widely embraced.	39	50.0	1.7692	.87243
Employees in our organisation face consequences for novel ideas that fail	40	20.0	2.2750	.78406
Our company views innovation as being too dangerous and resists it.	40	35.0	1.9500	.81492
		35.0	1.9980	
<i>iii. Level of competition</i>				
Anything that one competitor offers, others can match readily	40	17.5	2.1750	.71208
Our competitive are relatively weak	39	20.0	2.3077	.79980
There are numerous promotion conflicts in our industry.	40	27.5	2.1750	.84391
		21.6666	2.2192	
<i>iv. Customer demand</i>				
“Customers’ service preferences change quite a bit over time”	40	50.0	1.6250	.70484
“Customers tend to look for new services all the time”	40	77.5	1.3250	.65584
“New guests tend to have service-related needs that are different from those of our existing guests”	40	70.0	1.3750	.62788
		65.8333	1.3166	

Source: Field survey (2020).

8. DISCUSSION

It is concluded that solid waste management, followed by liquid waste management, green energy consumption, and efficiency, were the three green practises most frequently used by hotels in Sunyani Municipality. Customer demand is the pressing factor that influenced hotels in the municipality to go green. According to earlier studies, customer demand significantly improves environmental management methods (Le et al., 2006; Delmas & Toffel, 2004).

Government regulation and policy, Customer demand, level of competition have impact on green practises adoption according to this study. Implications are that greening should be encouraged through recognising, promoting, and honouring green hotel mentors for current and

prospective hotel managers and green practise promotion. Government and allied agencies, in particular, should engage actively with smaller hotels and persuade more on managers in emphasising the competitiveness. It will enhance hotel market position especially in a competitive benefit resulting from the growing demand of sustainable and green products and services, particularly among eco-friendly consumers, result in economic benefits due to decreased firm's production costs. An environmental educational program is more effective at encouraging changes in behaviour which is in line with the behavioural theory highlighted in literature. Few managers were aware of and involved in green measures to some extent. Environmental management systems did not persuade the few who adopted the methods. As a result, through seminars and training, independent groups must advocate wider usage of green initiatives that are voluntary.

In addition, as of now, there are no policies in place for green practices in these studied hotels. However, few hotels are indulging in ecologically initiatives. To protect the environment, some hotel managers employ green management techniques because of the environmental problems caused by their businesses. This isn't always the case, though. This suggests a gap between hotel managers' knowledge of appropriate eco-friendly practises, highlighting the need for sustainability - oriented training and increased awareness. The far more essential human resource for hotels is thought to be “training” their staff in highly desired skills and expertise because this can increase staff satisfaction in both their work and personal lives. Besides that, training staff is thought to be an efficient way to boost hotel efficiency and service reliability. Despite the fact that there is limited information about sustainable initiatives among hotels in the Sunyani municipality, the volume and variety of environmental consequences that hotels face suggest that mitigating measures are urgently needed (Rogerson & Sims, 2012; Ishmael, 2006).

8.1. Managerial Implications

Hotel operators are recommended to apply green business practices in their facilities. These regulations offer standards, recommendations and also specify how it must be accomplished to lessen the influence on the environment of hotel operations and also hotels should adopt and track the success of green policies in their facilities. Hotel managers should send their staff for training on green management and environmentally friendly practises developed by green initiative agencies, institutions, and universities. These trainings would help strengthen sustainability in hotel operation which depends heavily on how accessible and supportive green training is to employees. This would also help workers understand how their operations relate to the current generation's environmental issues. They will also recognise that they have a responsibility to reduce environmental consequences by implementing environmentally sustainable projects.

Hotels managers should create sustainability training programmes that will enhance hotel staff awareness of the environment, abilities, and practices. Additionally, Top managers need to focus more on the critical role that green training support plays in raising the bar for hotel sustainability impact. Hotels should create a conducive environment that increases the quality and efficacy of participants in the green training programmes. In order to get a competitive edge through satisfying the needs of the hospitality sector, hotel managers should be conscious of the significance of sustainability practices. By reducing waste and using less energy and water

during operations, you may better serve your clients' environmental needs while enhancing your bottom line.

8.2. Limitations and Future Research

There is some limitation as far as this paper is concerned. First of all, our research is not generalizable. Only hotels in the Sunyani metropolis was of interest to us. In order to compare our findings with those from the other region in Ghana, we would like to look into further, hotels in the entire Bono Region. We presume that it would be beneficial to compare different countries and areas. In addition, we would like to explore in the near future research on relationship between the hotel's financial success and the adoption of environmental policies.

Last but not the least, our focus would be on the level of adoption and implementation of green practices on the various categories of hotels and also examine barriers in implementing green practices among hotels. There hasn't been much research done on managers' roles in hotels' environmentally friendly operations. This would be explored qualitatively. Nevertheless, there is constantly room for advancements.

REFERENCES

- Agarwal, P. K., Nunes, L. D., & Blunt, J. R. (2021). Retrieval practice consistently benefits student learning: A systematic review of applied research in schools and classrooms. *Educational Psychology Review*, 33, 1409-1453.
- Allen, Y. (2007). *Innovation pushes Edmonton to the leading edge of waste management*, [https://www.fcm.ca/Documents/presentations/2007/mission/Innovation pushes Edmonto to the leading edge of waste management EN.pdf](https://www.fcm.ca/Documents/presentations/2007/mission/Innovation%20pushes%20Edmonton%20to%20the%20leading%20edge%20of%20waste%20management%20EN.pdf)
- Al-Shourah, A.A. (2007). The Relationship Between Environmental Management Practices (Emp) and Hotel Performance: Emp Drivers and the Moderating Role of Perceived Benefits, Unpublished PhD Thesis, Universiti Sains Malaysia, Pulau Pinang.
- Andrea, M.O. (2007). Atmospheric aerosols versus greenhouse gases in the twenty-first century philosophical transactions. *Mathematical, Physical and Engineering Sciences*, 365(1865), 1915–1923.
- Aragon-Correa, J. A., & Sharma, S. (2003). A contingent resource based view of proactive corporate environmental strategy. *Academy of management review*, 28(1), 71-88.
- Bohdanowicz, P., Zientara, P. & Novatna, E. (2011). International hotel chains and environmental protection: an analysis of Hilton's we care programme (Europe, 2006-2008), *Journal of sustainable tourism*, 19(7), 797-816.
- Bohdanowicz, P. (2006). Environmental awareness and initiatives in the Swedish and Polish hotel industries—survey results. *International Journal of Hospitality Management*, 25(4), 662-682.
- Cascardo, A. (2007). Indoor air pollution: an ever-growing threat to our society. Executive Housekeeping Today, October 9-13.
- Christmann, P. & Taylor, G. (2001). Globalization and the environment: determinants of firm self-regulation in China. *Journal of International Business Studies*, 32(3), 439-458.
- Creswell, J.,W. & Creswell, J.D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed. Thousand Oaks, CA: Sage.

- Darnall, N., Henriques, I. & Sadorsky, P. (2008). Do environmental management systems improve business performance in an international setting? *Journal of International Management*, 14(4), 364-376.
- Irfan, M., Zhao, Z. Y., Ahmad, M., & Mukeshimana, M. C. (2019). Solar energy development in Pakistan: Barriers and policy recommendations. *Sustainability*, 11(4), 1206.
- Delmas, M.A. & Toffel, M. W. (2003). Institutional pressure and environmental management practices, in a paper presented at the 11th International Conference of the Greening of Industry Network, San Francisco, CA.
- Li, Y., Yang, X., Ran, Q., Wu, H., Irfan, M., & Ahmad, M. (2021). Energy structure, digital economy, and carbon emissions: evidence from China. *Environmental Science and Pollution Research*, 28, 64606-64629.
- Iqbal, W., Tang, Y. M., Chau, K. Y., Irfan, M., & Mohsin, M. (2021). Nexus between air pollution and NCOV-2019 in China: application of negative binomial regression analysis. *Process Safety and Environmental Protection*, 150, 557-565.
- Dewhurst, H., & Thomas, R. (2003). Encouraging Sustainable Business Practices in a Non-regulatory Environment: A Case Study of Small Tourism Firms in a UK National Park. *Journal of Sustainable Tourism*, 11(5), 383-403.
- Dodds, R. (2008). Why Go Green? The Business Case for Environmental Commitment in the Canadian Hotel Industry. *Anatolia: An International journal of Tourism and Hospitality Research*, 19(2), 251-270.
- Dondo, C. H., Bhunu, S.T. & Rivett, U. (2002). GIS In Tourism – A Zimbabwe perspective, 34(6), 197-200.
- Eltayeb, T.K., Zailani, S. & Jayaraman, K. (2010). The examination on the drivers for green purchasing adoption among EMS 14001 certified companies in Malaysia. *Journal of Manufacturing Technology Management*, 21(2), 206-225.
- Gifford, R. (2008a). Psychology's essential role in climate change. *Canadian Psychology/ Psychologie Canadienne*, 49, 273-280.
- Gise, (2009). Improving Operations Performance in a small Company: A Case Study. *International Journal of Operations & Production Management*, 20 (3).
- Han, H., Hsu, J. & Sheu, C., (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management* 31(3), 325-334.
- Hsieh, Y. (2012). Hotel companies' environmental policies & practices: a content analysis of web pages. *International journal of contemporary hospitality management*, 24(1), 97-121.
- Hurley, R.F. & Hult, G.T.M. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *Journal of Marketing*, 62(3), 42-54.
- Jaworski, B.J. & Kohli, A.K. (1996). Market orientation: review, refinement, and roadmap. *Journal of Market-Focused Management*, 1(2), 119-135.
- Irfan, M., Elavarasan, R. M., Hao, Y., Feng, M., & Sailan, D. (2021). An assessment of consumers' willingness to utilize solar energy in China: End-users' perspective. *Journal of Cleaner Production*, 292, 126008.
- Irfan, M., Hao, Y., Ikram, M., Wu, H., Akram, R., & Rauf, A. (2021). Assessment of the public acceptance and utilization of renewable energy in Pakistan. *Sustainable Production and Consumption*, 27, 312-324.
- Kaiser, F. G., Wölfling, S., & Fuhrer, U. (1999). Environmental Attitude and Ecological Behaviour. *Journal of Environmental Psychology*, 19, 1-19.

- Kasim, A. (2017). Corporate environmentalism in the hotel sector: evidence of drivers and barriers in Penang, Malaysia. *Journal of Sustainable Tourism*, 15 (6), 680-699.
- Kasim, A. (2009). Managerial attitudes towards environmental management among small and medium hotels in Kuala Lumpur. *Journal of Sustainable Tourism*, 17 (6), 709-725.
- Laroche, M., Bergeron, J. & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing*, 18(6), 503-520.
- Le, Y., Hollenhorst, S., Harris, C., McLaughlin, W. & Shook, S. (2006). Environmental management: a study of Vietnamese hotels. *Annals of Tourism Research*, 33, 545-567.
- Leonidou, L. C., Leonidou, C. N., Fotiadis, T. A., & Zeriti, A. (2013). Resources and Capabilities as Drivers of Hotel Environmental Marketing Strategy: Implications for Competitive Advantage and Performance. *Tourism Management*, 35, 94–110.
- Manaktola, K. & Jauhari, V. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management* 19(5), 364–377.
- Maphosa, F. (1997). Corporate social responsibility in Zimbabwe: A content analysis of mission statements and annual reports. *Zambezia XXIV* (ii), 180–193.
- Mbasera, M., Du Plessis, E., Saayman, M. & Kruger, M. (2016). Environmentally-friendly practices in hotels. *Acta Commercii* 16(1)
- McDougal F, White P, Franke M & Hindle P (2001) *Integrated Solid Waste Management: A Life Cycle Inventory*, 2nd edn. Blackwell Science, Oxford, UK
- Mensah, I. (2006). Environmental management practices among hotels in the greater Accra region. *International Journal of Hospitality Management*, 25(3), 0–431.
- Millar, M., Mayer, K.J. & Baloglu, S. (2012). Importance of green hotel attributes to business and leisure travellers. *Journal of hospitality marketing & management*, 21(4), 395-413.
- Molina-Azorín, J.F., Claver-Cortés, E., Pe reira-Moliner, J. & Tarí, J.J. (2009b). Environmental practices and firm performance: An empirical analysis in the Spanish hotel industry. *Journal of Cleaner Production*, 17, 516-524.
- Moreo, A. (2008). Green Consumption in hotel Industry an examination of consumer attitudes. Google scholar accessed 27 March 2019.
- Mungai, M. & Urungu, R. (2013). An assessment of management commitment to application of green practices in 4-5-star hotels in Mombasa, Kenya. *Information and knowledge management*, 3(6), 40-47.
- Neuman, W. (2014) *Social Research Methods: Qualitative and Quantitative Approaches*. Pearson, Essex, UK.
- Nhapi, I. & Gijzen, H.J. (2005). A 3 Step Strategic approach to sustainable wastewater management. *Water SA* 31(1), 133–140.
- Oberiri, A. D. (2017). The Influence of Social Media on Academic Performance of Taraba State University Undergraduate Students. *Online Journal of Communication and Media Technologies*, 7(4), 141-161.
- Odeku, K.O. (2018). Proactive responses to mitigate climate change impacts by the hospitality sector in South Africa. *African Journal of Hospitality, Tourism and Leisure*. 7, 1–13.
- Robinot, E. & Giannelloni, J. L. (2010). Do hotels’ “green” attributes contribute to customer satisfaction? *Journal of Services Marketing* 24(2), 157-169

- Rogerson, J. M. (2012). The Boutique hotel industry in South Africa: Definition, scope and organisation. *Symposium on Motivation*, 27, 65-116.
- Rogerson, J.M. & Sims, S.R. (2012). The greening of urban hotels in South Africa: Evidence from Gauteng. *Urban Forum* 23(3), 391–407.
- Sara, J & Ragan, P, (2013). Favor Trading in Public Good Provision. Working Papers 1032, George Mason University, *Interdisciplinary Centre for Economic Science*.
- Serlen, B. (2008). Consumer appeal of green means more of it soon. *Hotel Business*, 17, 18.
- Sigala, M. (2006). E-procurement diffusion in the supply chain of food service operators: an exploratory study in Greece. *Information Technology & Tourism*, 8, 79-90.
- Spenceley, A. (2005). *Tourism certification initiatives in Africa*. The International Ecotourism Society (TIES), Washington, DC.
- Suttell, R. (2005). Hospitality and IAQ. *Buildings*, November 62-74.
- Tang, F. E. (2012). A study of water consumption in two Malaysian resorts. *International journal of environmental, Ecological and geophysical engineering*, 6(8), 88-93.
- Timothy, D. J. & Teye, V. B. (2009). Tourism & Lodging sector UK-Oxford Elsevier INC.
- U.S Environmental Protection Agency. *International Journal of Hospitality Management*, 21(1), 57-66.
- Van der Merwe, M. & Wocke, A. (2007). An investigation into responsible tourism practices in South African hotel industry. *South African Journal of Business Management* 38(1), 1–17.
- Verginis, C. S. & Wood, R. C. (1999). Accommodation management; perspectives for the international hotel industry, London, Thomson Business Press.
- Vermillion, L. (2008). The meaning of green. *Lodging*, 33(6), 26-30.