

Green hotel development: Towards the building of resilient cities in Ghana

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Abstract

In recent times, there have been concerns about how hotels are negatively impacting on the environment both globally and locally. Hotels have been tasked to reduce such ecological footprints by managing the environment in cities. Responding to such concerns, this paper therefore presents an empirical study on how the tourism industry in Ghanaian cities specifically hotels contribute to creating resilient, healthy and vital cities. Previous studies conducted on the tourism and hospitality industry have revealed its trending pressure on land-use and infrastructure development, over consumption of resources, the generation of waste and air pollution. The industry is known to consume a considerable amount of natural resources, both in its developmental and operational stages. Tourism is therefore described as an extractive industry as it operates by making use of environmental resource and transforming them for sale in consumer markets. Using the purposive sampling technique, the highest star-rated hotels in a city named Koforidua in Ghana were selected as case studies. Top management of these hotels, together with officials from the relevant Government Actors were interviewed. The results of the study indicated that these hotels in the city were environmentally cautious as far as promoting resilient and vital cities is concerned. The observations and interviews showed that they were in the business of building resilience in areas such as effective solid and liquid waste management methods, renewable energy development, green designs, energy efficiency and water conservation, green environmental regulation compliance. This study seeks to advice policy makers, management of hotels and government institutions in charge of environmental management to develop an approach in promoting hotel's operation, which will be integrating environmental respect and awareness with economy and quality production. In short, it promotes a compatible organizational culture portraying an employee awareness and involvement in the protection of the environment.

Keywords: environment, tourism, management.

1. Introduction

The environment especially at the beginning of the 21st century has come under serious threat. This includes, but unlimited to; global warming, ozone layer depletion, abuse of non-renewable resources, air pollution, traffic patterns, noise pollution and generation of waste [1], [2]. Despite the numerous factors accounted for the causes of these environmental issues, globalization and the ever increasing world population are however named as the highest contributor to these challenges [3]. As a result, there have been the need for the globalization of environmental concerns [4], [5].

Even though, initially environmental problems were widely understood as by-products of industrial development and a new trend of lifestyle, in recent times, policy-makers especially in developing countries are now adopting the appropriate remedy to save these predicaments [6], [7]. In other words, there have been the need to take business actions towards the reclaiming of the natural environment in developing countries. In addition to that, Governments across the world have reacted by placing environmental concerns on the International Agenda via events such as United Nations Conference on Human Development (UNCHD) which was held in 1972 and the Rio Earth Summit of 1991 and the recent Sustainable Development Goals (SDGs) of the United Nations [8], [9], [7].

Studies conducted in the tourism industry has revealed its trending pressure on land-use and infrastructure development, over consumption of resources, the generation of waste and air pollution [10], [11]. They found the industry to consume considerable amount of natural resources, both in its developmental and operational stages. As a result, tourism is therefore described as an extractive industry since it operates by making use of natural resources available and also transforming them for sale in consumer markets [12] [13],[14]. As a result of this, the damaging impacts of tourism are increasingly becoming a topic of debate according to Faulk [15] and the economic impacts for destinations with visibly depleted or polluted natural environments are severe [16].

Globally, the levels of energy savings and emissions reduction became a key role to play in the industry and this led to the emergence of green hotels [10]. Similarly, concerns about environmental protection also brought about changes in consumer demand and behavior. This resulted in consumers becoming more environmentally cautious and showed preference to green organizations and products [8],[17]. This however means that, there is also a growing consumer pressure for hotels to adopt green principles and strategies in order to build resiliency in the cities in which they operate. Han *et al.* (2009) argue green tourists are seeking to buy eco-friendly products and services, preferring firms that favor environmental management practices. It had therefore become a norm that consumers in some parts of the world are now becoming more environmentally cautious and seem to prefer green organizations and products [8]. This means that majority of hotels, mostly in the developed countries, have reacted to environmental concerns by embarking on a lot of environmental practices. Therefore, the environmental performance, environmental management and operational practices of a tourism enterprise is very much part of today's agenda and the industry is underneath exceptional stress to become extra environmentally-friendly and sustainable Systems [13], [18]. Since research conducted have attributed the hotel customers' ecofriendly decisions to their environmental consciousness, it becomes crucial to investigate the potential benefits for their green demand on environmental responsibility [19], [20], [21],[22] also confirm that the housing market in have residents who are willing to pay a green premium when living comfort improves; however, little research have therefore investigated the living comfort of green hotels. Other studies have also proven that green buildings can achieve superior performance in thermal comfort (mainly temperature and humidity), acoustics, lighting and the value of going Green [23], [24],[10].

In Ghana, the hospitality industry comes under the authority of the Ministry of Tourism. In 1993, the Ministry of Tourism was created with the duty to develop, promote and coordinate all activities of tourism in Ghana. Together with the Ghana Tourism Authority (GTA) [45], they are the policy making body. GTA, however, is the main implementing agency. Ghana Tourism Act, 2011 (Act 817). The industry makes a significant contribution to Ghana's economy. A major percentage of the population is employed by it. The industry, in some parts of the country, is the main source of employment and income. It is a labor intensive industry, accounting for 5.9% of total employment in Ghana and could, therefore, help reduce the unemployment rate in the country [25]. He further hints that the hotel sector in Ghana has also grown rapidly since the 1990s in response to tourism growth and also with the advent of the Economic Recovery Program

and the Structural Adjustment Program (ERP/SAP) in 1986 by the erstwhile Provisional National Defense Council (PNDC) government. According to Price Waterhouse Coopers (2006), Ghana is shifting its focus gradually from primary commodities to market-oriented economy emphasizing on tourism and the hospitality industry in general. Hence, this must be managed to meet international standards in order to reap the full benefits that the industry offers. Businesses are increasingly tasked to shoulder their duty for their social, ethical and environmental impact, with this pressure especially keenly felt in consumer-facing industries. Following the introduction of the Economic Community of West African States (ECOWAS) Standards for Classification of Hotels, the GTA, “shall keep a register of accommodation and catering enterprises in which shall be entered such particulars of every accommodation and catering enterprise required to be registered under these regulations as the Authority may consider necessary”.

Various research have therefore revealed the level of implementation of environmental management practices and policies as well as practices among hotels in selected cities in Ghana. Sub-Saharan cities like Accra are somehow making conscious efforts by adopting sustainable tourism practices by looking at their green business initiatives and practices [25], [26], [27] goes further to argue that hotels specifically those in under-developed and deprived regions like the Northern Region in Ghana need to also adopt environmentally friendly practices and initiatives. In order to bridge the gap, the dimension of this particular study is focused on how hotel managers together with government regulators are contributing to the development of green hotels as a way of building a resilient, vital and healthy city using Koforidua, as a study area.

The article is divided into 5 parts. The first section gives a background to hotels and how they impact on the environment and also an overview of the Ghanaian hospitality industry. The second, presents the conceptual literature. It also discusses the benefits of green business in hotels and presents a conceptual framework for the study. Section 3 addresses the research approach while Section 4 discusses the key results and discussions. The final section presents the policy and practice implications of developing.

2. Conceptual Literature

2.1 Green Business in Hotels

In the hospitality industry, management of the environment has been of much concern to industry practitioners and scholars, as a growing business strategy. In developed countries, the industry is initiating environmental management programs [26].

For example, a survey conducted by Barlet in 1992 in Hong Kong survey in 1992 showed that an estimate of 30% of hotels in the city have introduced environmental initiatives with different levels of success. That notwithstanding, Graciet *al.* [28] also revealed in their findings that quite a number of hotels in Toronto (Canada) were ahead as far as environmental programmes and initiatives are concerned. [13], [29] believe that environmental management practices in the hotel industry include green purchasing or procurement, environmental policy formulation and implementation, environmental auditing, compliance with environmental laws and regulations, eco-labelling and certification, waste management and recycling, resource conservation, pollution

prevention, environmental education, environmentally responsible marketing and corporate social responsibilities. Energy savings and waste management have been of prime concern in hotel environmental management and an American Hotel and Motel Association (AH&MA) survey revealed that hotel managers rated waste management through recycling and reduction of energy consumption as their most vital concerns. Hotels in Chicago are mostly embarking on solid and liquid waste management programmes, for example, the Hyatt Regency hotel was able to recover about \$120,000 in hotel items such as silverware from trash between the period of 1997 and 1998 through a recycling program [30]. In a similar manner also, Chan & Lam (2001) confirm that, in the hospitality sector, the focus of the green campaign has been on energy savings. A lot of hotels engage in energy-saving practices which include using compact fluorescent bulbs or shutting down appliances when not in use. The Inter-Continental in Los Angeles saved \$12,000 in electricity costs after installing a power monitoring system. Conservation of water and improvement on the quality of water have also been targeted by environmental management partly because the hotel industry is greatly affected by the non-availability of the right amounts and quality of water and will face difficulty in reducing over-consumption and dealing with water cost and conservation [31]. At Sandals Negril, approximately 45,000m³ of water was saved at the 215-room hotel in Jamaica because an environmental management system initiated by the hotel management [44].

Hotel managers are also increasingly realizing the need to adapt to and support the local environment within which they operate as their Corporate Social Responsibility. In Western Samoa, the European Union (EU) funded hotel construction project uses traditional techniques and designs. Materials are only imported where local substitutes cannot be manufactured. Mensah [25] noted that, despite the growing fame of environmental management in hotels, only larger hotels have been found to be at the forefront of environmental management programmes and this is because of the absence of capital or internal arrangement structure by small and medium scale accommodation companies to be actively involved in environmental management programs and initiatives. Inferring from the above literature, environmental management has been beneficial to the larger hotels that have adopted such initiatives and practices. This can be drawn from the fact that the corporate image of such businesses have improved in parts of Ghana and elsewhere.

2.2 Conceptual framework

Cekanavicius *et al.*, [32] mention that there was an emergence of the green business idea at the end of the 20th century and this was in the advent of the ever-increasing public concern about how economic activities could be sustained. It was in turn stirred up by the growing awareness of environmental issues such as the increase in depletion of natural resources, waste generation and environmental quality deterioration. Brown & Ratledge [33] adopt quite a narrow definition of green business and defined it as “an establishment that produces green output”. Meanwhile, Makower & Pyke [34] posit that a green business demands a balanced commitment to environmental sustainability, profitability and social humanity. Similarly, Croston [35] states that practices of green businesses are more sustainable than their competitors. Their natural systems are benefitting and they also help improve the standard of living of people while they

contribute to the economy. Slovik[36] then proposes a merger of the demand of sustainability of the environment with that of social responsibility. A green business can be defined as an organization which is not only environmentally sustainable but also socially responsible. For the purposes of this paper, the author proposes the definition of green hotel development as one that is committed to the principles of environmental sustainability in its operations, thus, strives to reduce the negative environmental impact of its activities. In this view, greening of business is part of a long-term strategy to become sustainable, therefore, being able to achieve business goals in a way that does not develop any threat economically, socially or environmentally for both current and future generations. Brockeet *al.*[37] note that in managing businesses and their operations, it has become evident that firms have traditionally targeted economic imperatives with regards to time, cost, efficiency and quality and that has adversely contributed to environmental degradation either by resource use, Green House Gas emissions and waste generation.

In the advent of environmental sustainability as an additional dimension of organizational performance, these process imperatives are increasingly being subjected to critical examination by Government Regulators. This is because they do not appropriately reflect environmental objectives such as minimization of energy consumption, reduction of carbon footprint and provision of ecologically sustainable solutions. However, the global and local impact of hotels on the environment where there is unregulated development of such facilities has led to calls for hotels to cut down their carbon footprints by embarking on green business practices because sustainable hotels proceed to sustainable destinations [38]. Becoming green is a multifaceted process; there is a wide array of practices that can be embarked on when businesses want to shift to green behaviors. Notably, an environmentally-aware business should participate in efficient resource consumption and waste management practices.

In a study conducted by Bader (2005), it was revealed that there are many benefits that hotels can reap from sustainable efforts, such as appearing attractive to guests, creating a positive image and being cost-effective. Additionally, because the payback period is relatively short and there are long-term economic savings, implementing sustainable measures seems to be a financially sound investment for hoteliers. The environmental impact from the activities of a hotel (either globally or locally) is typically from the generation of both solid and liquid wastes. Solid waste includes used papers and plastics, food leftovers, rubbers and liquid waste is generally from washrooms, kitchen and laundry. Energy consumption in hotels can greatly up carbon dioxide emissions and, thus, lead to the global warming. An environmentally-aware business could participate in sustainable business practices such as proper waste management practices and efficient resource consumption. It is, however, realized that hotels can reap from green business or sustainable efforts. Some of these environmental benefits include waste reduction and pollution prevention as well as reducing carbon footprint. Socially, the health and safety of workers and customers are protected. It also gives the business a very good reputation. In economic terms, it tends to increase the profit margin of the business since conserving energy together with water can lead to considerable cost savings. Regarding the hotel industry, it was found by Lozano-Oyalo et al.[39] that quality and environmental

management are useful for increasing competitive advantage in term of both cost and differentiation especially for independent hotels.

3.The study area

The study was carried out in the New Juaben Municipality, Koforidua specifically. Falling within the Eastern Region of Ghana, the municipality covers an estimated area of 110 square kilometres constituting 0.57 % of the total land area of the Eastern Region. It has a settlement population of 127,334 (Population and Housing Census, 2010).

Koforidua, the regional capital, is made up of several towns and neighborhoods. The city serves as the center for commercial activities for the New Juaben Municipality. It was chosen because little research attention had been paid to green business practices among hotels in the area.

Using the purposive sampling technique, the highest-rated hotels in the city were used as case studies. It takes a holistic view of the hospitality industry with special emphasis on examining green business practices in these hotels. The reason for the choice of these hotels is the competitive advantage they are enjoying for being the highest rated star hotels in the industry in the city, Koforidua.

3.1 Research Design

The study adopted the qualitative research approach. According to Burns *et al.* (2009), this approach is the blueprint for conducting a study where it guides the researcher in planning and implementation in such a way that it achieves the intended goals. This approach was carried out to provide an in-depth understanding of environmental impacts that arises from the activities of the hotel industry as well as green practices currently adopted to mitigate the associated environmental impacts. A total sample of 15 participants were interviewed. This included respondents from each of the highest star-rated hotels in a Ghanaian city and also Government Regulators, all in Koforidua. From the hotels, the respondents comprised of the Chief Executive Offices, General Managers, Environmental Officers, Operations Managers and the Maintenance officers. Similarly, the respondents from the government bodies comprised of the Regional Directors and Senior Program officers. These employees and government officials were interviewed because of their roles in the organizations and experience. The interview data was transcribed manually verbatim. The transcribed data was as well augmented with field notes taken during data collection. Information from the transcription was well evaluated and analyzed thematically and that was used to address the objective of the study.

Primary data was also collected by means of site observations at these hotels under study. These observations enabled the researcher gain deeper insight into the various green business practices or strategies and the extent to which sustainable environmental practices are adopted. In addition to the primary data, secondary data included review of journals, articles, reports, both published and unpublished materials. From the literature review, the main conceptual framework of the study was formulated and this formed the basis of which the various analyses were made.

4. Discussion of Findings

4.1 Hotels' compliance with environmental management policy

The study discovered that the highest-rated hotels had complied with the Environmental Protection Agency Act 490, (1994) and the Environmental Assessment Regulations (LI 1652) [40], the Accommodation and Catering Enterprises Regulation (LI 1205), Fire Precautions (premise) Regulations 2003, (LI 1724) amongst others. In doing this, management of these hotels under study had acquired the necessary permits from the relevant government regulators and copies of the permits were displayed at the front desk (reception).

In order to confirm the statement above, further interviews were conducted with officers of the leading regulatory bodies in the hospitality industry namely the Environmental Protection Agency (EPA) [41], [42] and the Ghana Tourism Authority (GTA) [44]. This was to ascertain whether the hotels had complied with the regulations as indicated earlier by management.

It was revealed that the hotels had accordingly complied with environmental directives and had submitted Environmental Impact Assessments to the Agency and had subsequently been issued with Environmental Permits. One of the officers made reference to the EPA Act 490 (1994) [41] which requires that any person or company responsible for an undertaking which in the opinion of the Agency has or is likely to have adverse effect on the environment shall upon request, submit in respect of the undertaking an Environmental Impact Assessment (EIA) containing such information within such period as shall be specified in the notice. By this mandate the Agency requires all developers including hoteliers to prepare and submit an EIA of their projects for review and permit.

Similar to the EPA Act, 1994 (Act 490), the GTA under the Accommodation and Catering Enterprises Regulation 1979 (LI 1205) also require the management and operators of hotels to conform to the safety requirements of the global hospitality industry. Regulators indicated, the core mandate of the Authority was to ensure the formulation of policies and co-ordination of activities in the industry, Research respondents stated that as a Government Authority, the office undertake research and studies on trends in the tourism industry as well as carry out registration, classification, licensing and control of standards in the accommodation and catering enterprises. A research interviewee indicated that, *These highest-rated hotels are consistently renewing their operational licenses and also do well to comply with the permit conditions unlike the others*

The responses from the study confirmed that at least the top employees from these hotels were fully aware of the policies on environment, health and safety. Not only that but other employees expressed their awareness on a policy document which contained objectives on how to keep the environment in which their facility operates in good shape. A common theme in the policy document is the need to comply with environmental regulations and proper waste management. This particular strategy supports the findings of Mensah [25], [26] who notes that in the Greater Accra Region of Ghana, few hotels had environmental policies and they were mainly aimed at achieving a safe and healthy environment. In other similar studies elsewhere, hotels had a written environmental policy statement that

covered environmental management in general [19],[13]. This implies that green hotel management should be geared towards encouraging greater industry and self-regulation rather than enforcement by government regulators. Since the EPA is responsible for the country's environmental protection and enhancement and with its statutory responsibility, the agency, among other things should seek to ensure that environmental policy and planning are implemented and integrated to be consistent with the country's desire for effective, long term maintenance of environmental quality.

4.2 Waste Generation and Management

This section focused on the sources of waste generated and how it is managed in these hotels. Respondents indicated that, the main sources of liquid waste generation in the hotel were from:

- Water used for sanitary purposes such as laundry, cleaning, personal washing, bathing and lavatories amongst others
- Water used for kitchen and catering services like the restaurant and bars
- Water from the swimming pool during cleaning and scrubbing sessions.

In addition, liquid waste from the lavatories (black water) and grey water which is the waste water emanating from wash rooms, laundry, cleaning, washing, bathing also constitute the domestic sewage generated. Not only the above but operational activities certainly generated solid wastes in the hotel and according to one of the employees interviewed, *majority of solid waste is generated is the catering area which comprises of the kitchen, the restaurants and the bars.*

This kind of waste include food wrappers, cans, polythene and waste food. About 80% of this waste is composed of food waste (fruit and vegetable peels) which is biodegradable and could attract disease vectors such as flies, cockroaches, rodents and worms. Other sources of solid waste generation apart from those already mentioned is the lodging facilities, offices and the secretarial and the reception. Waste from these sources is mostly made up of papers mixed with some plastic materials, packaging materials, bed linens, napkins and table clothes amongst others. At the hotel, there are dustbins placed at vantage points to collect solid waste generated. These bins are further emptied into a dumpsite on the hotel premise.

Furthermore, the management patronized products with less packaging and do well to buy in bulk rather than small packs in order to reduce waste. On the other hand, liquid waste from the washrooms is channeled into a septic tank on the hotel premise. This is dislodged by the New Juaben Municipal Assembly as and when it gets filled up to prevent pollution. Waste water discharges from the laundry, kitchen, and other areas are channeled through laid down pipes to a nearby drainage system. Since operations at the hotel is basically meant to service guests, occupational health and safety concerns at the facility apply equally to both staff and guests. The most easily identifiable risks will include hygiene at the washrooms, quality of cleaning for rooms and beddings, food safety, slips and falls along floors and stairways and other areas. Respondents also indicated that, such practices include daily cleaning and disinfection of all rooms, sanitary facilities, corridors, reception, restaurant, etc. The washrooms and all places of public use

such as the conference rooms, bar, swimming pool, gym and others are cleaned intensively at an hour interval especially during events. It was also unearthed that the Environmental Protection Agency has the statutory mandate to guide developers (hoteliers) in their projects in order to provide facilities that will enhance the country's environment as well as improving the lives of its customers. The EPA is particularly concerned about waste management (both liquid and solid), sewage, traffic impacts, air and noise pollution, as well as health and safety of the both workers and occupants of the hotels. Additionally, the EPA guides such facilities in order to prevent, reduce and as much as possible, eliminate pollution and actions that lower quality of life. The Agency therefore has the legal mandate to enforce all the advice or directives given to the hotels and can prosecute them when they contravene the directives. The EPA works collaboratively with the GTA in order to promote sustainable tourism in the industry, the GTA occasionally organizes educational programs for hoteliers in the region and across the country in order to train them on the current trends of sustainable tourism.

4.3 Resource Efficiency (Energy and Water)

Hotels are perceived to impact the natural environment negatively and the responses given below by respondents were in contention with the fact that high levels of energy consumption is one of the key impact of hotels on the environment. This, therefore, confirms the existing literature which reveals that hotels consume the largest amount of energy compared to other accommodation establishments. To support that assertion, Bohdanowicz[13] also points out that the depletion of energy resources is a major threat facing the tourism and hospitality industry. In particular, the hotel sector is associated with excessive consumption of energy and is regarded as a significant contributor to greenhouse gases. Various researchers have argued that with the broad range of services hotels provide, they have the potential to achieve energy savings across the number of functions as stated in the findings above.

From the researcher's perspective, hotels could also take full advantage of solar energy but the resistance to the use of solar energy is mainly attributed to the high initial cost of solar panel installation. The key card (swipe card) is also an important energy saving measure for both hotels since it avoids the unnecessary usage of electricity. Erdogan and Baris (2007) believe that this approach is considered a high impact energy saving measure and a low-cost measure and a number of hotels have reported to have reduced energy use by adopting this. Rahman et al. (2012) posit that the willingness of a hotel facility to engage in environmental concerns depends on the size of a hotel and facilities available since larger facilities tend to consume greater amount of energy. This can be attributed to the fact that larger accommodation establishments usually have a higher number of guests and offer services that utilize energy.

Water conservation appears to be one of the green development initiatives undertaken by hotels. From the findings of the study, in conserving water in both facilities, they used low-flow shower heads and sinks since this is also a cost saving measure. Goosling et al.(2012) buttress the above findings by mentioning in their study that the quantity of water consumed in the hotel industry is purposely used for taking showers, flushing toilets, laundry and kitchen and because water consumption is far higher than household

consumption, water consumption then becomes a major concern for hoteliers. Conservation of water was one area that the hotels performed relatively better. The best performance in this area was in the immediate fixation of leaking pipes and followed by installation of water-efficient devices and equipment.

5. Conclusion

The empirical evidence in the preceding sections show that hotels are mindful of the environmental impacts of their activities and thus, taking conscious efforts to put in place appropriate policy measures and initiatives that ensure sustainable development and a healthy environment. The case study hotels are strategically implementing green business strategies in order to enhance sound environmental and sustainable hospitality business in the country. They all have respectively taken some remarkable measures to reduce not only energy consumption, but also water conservation and waste management to avoid damaging the environment of their destinations. This makes the hotels meet the EPA's regulatory requirements and also attract more clients so as to actively remain in business whilst promoting and protecting the greenness of the natural ecology. In addition, these places have well documented organizational policy documents that guide their operations regarding energy, water and other necessities consumption and conservation as well as well planned waste management systems. The findings or results of the study suggest that the hotels are pre-occupied with reducing the amount of waste they generate. However, it is imperative that they engage in more environmentally responsible practice such as waste recycling. In doing this, there is the need for collaboration between hotels, government bodies and private organizations to contribute in constructing recycling plants. The unpopularity of voluntary environmental management, calls for Ghana's lead regulators in the hospitality industry to put in place an effective monitoring system which will reveal lots of environmental sensitive areas which need environmental management in the industry. This indicates that a gap exists between managers' awareness of appropriate environmentally-friendly practices for hotels, implying a need for training and increased awareness of green management.

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