

Availability and Implementation of Organizational Sustainable Waste Management Policies among Classified Hotels in Bauchi State, Nigeria

Esther O. Adebitan

*Department of Hospitality Management,
Federal Polytechnic, Bauchi Nigeria*

Abstract

The environment is where humans and businesses get resources to survive both socially and economically. However, waste generation and improper waste management have been found to be significant factors and contributors to environmental pollution and deterioration, attendant socioeconomic consequences. Widespread interest in environmental sustainability, protection and conservation has compelled businesses and industries notably hotels to evolve ways of drifting away from conventional albeit wasteful use of resources and unsustainable methods of waste management such as burning, landfilling and dumping to engaging in more efficient resource utilization and sustainable waste management practices. Implementing the sustainable use of resources and waste management methods however is less convenient and cannot be adopted haphazardly. These can only be effected deliberately, purposefully and with careful planning. Crafting and implementing organizational waste management policies are necessary for the purposes of monitoring and evaluation in order to ensure that set objectives of the policies are achieved. This study proposes that hotels' adoption of goal oriented sustainable resource utilization and waste management methods are dependent on their intentional and planned decisions articulated in the forms of organizational waste management policies. The objective of this study was to investigate whether or not classified hotels' operators have and implement sustainable resource utilization and waste management policies in their hotels. The study was carried out in Bauchi State, situated in the North-East geographical zone of Nigeria. Cross sectional descriptive survey design was adopted to achieve the study objective. Stratified and purposive sampling techniques were employed to select a total of 158 respondents consisting of 42 managers and 116 departmental heads involved in the study. Data was collected using a seven elucidating questions questionnaire for departmental heads and interviewing hotels managers. Results revealed that hotels in Bauchi State in the North-East region of Nigeria do not possess any crafted written document that may be referred to as organizational waste management policy and do not spell out their waste management responsibilities to employees, that hotels do not give any written document to their staff which spells out their waste management responsibilities and that hotels employees are given verbal instructions concerning waste management, and that the hotels have not included any of the suggested 5Rs sustainable waste management methods in their unarticulated organizational waste management policies. This study recommended that hotels' operators be sensitized on the environmental implication of adopting unsustainable waste management strategies, and that they be encouraged to craft and diligently implement waste management policies which must necessarily contain some, if not all of the sustainable waste management methods.

Keywords: *Organizational, Sustainable, Waste Management, Policies*

Corresponding Author: Esther O. Adebitan

Background to the Study

The world Commission on the Environment and Development popularly known as the Brudtl and Commission in 1987 defined sustainability as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Thomsen, 2013). The environment is where humans and businesses get resources to survive both socially and economically. The need to sustain the environment stem from the realisation that natural resources are fast depleting by reason of constantly drawing resources from the environment and not replacing or replenishing it. The other realisation is that the process of resource consumption and utilization for economic and developmental purposes usually result in different forms of environmental pollution which in turn deteriorate the environment and its resources. Waste generation and improper waste management have been found to be significant factors and contributors to environmental pollution and deterioration, with attendant socioeconomic consequences.

The hotel subsector of the hospitality industry is concerned mainly with the provision of food, drinks, accommodation and entertainment for its clients. All the resources needed to accomplish these goals are sourced from the natural environment making the hotel business environment dependent. However, the very processes of resource utilization during food and drinks production as well as provision of accommodation and entertainment also lead to massive waste generation. Hotels do not only source raw materials from the environment, it requires clean, scenic and resourceful environment to operate. For hotel business to succeed therefore, the environment must be sustainable, preserved, protected and conserved.

Widespread interest in environmental sustainability, protection and conservation has compelled businesses and industries notably hotels to evolve ways of drifting away from conventional albeit wasteful use of resources and unsustainable methods of waste management such as burning, land filling and dumping to engaging in more efficient resource utilization and sustainable waste management practices. Environmental sustainability according to Thwink.org is the ability to maintain rates of renewable resource harvest, pollution control. Sustainable resource use and waste management practices are those innovative ways of efficiently and judiciously using environmental resources and handling waste without causing damages to the environment (Conserve National Restaurant Association, 2014; Repak, 2015; Florida Department of Environmental Protection, 2015).

In Nigeria like most developing countries, resources such water, energy and other production materials are usually used generously without recourse to resource depletion and waste generated from their usage while the conventional and convenient ways of solid waste disposal has been through open burning, dumping on open fields and by land filling. These resource use and waste management methods are adjudged environmentally unsustainable as they lead to faster resource depletion, environmental, social and health hazards such as land, air and water pollution, diseases outbreaks, loss of aesthetics among others.

Sustainable resource use and waste management may be achieved through a collection of certain classified waste management methods referred to in this study as the 5Rs. These five

methods as explained by Manufacturing Skills Australia (2015), include in a hierarchical order, Resource efficiency which refers to total waste avoidance or complete waste elimination, waste Reduction which means to lessen or diminish the quantity of energy, water and materials that go to waste, waste Re-use which is utilizing materials and items for other purposes after it has been used for its original purpose, waste Recycle which is converting waste materials into new products and energy Recovery which refers to the conversion of non-recyclable waste materials into useable energy.

Implementing the sustainable use of resources and waste management methods however is less convenient and cannot be adopted haphazardly. These can only be effected deliberately, purposefully and with careful planning. Implementing the 5Rs may also require special instruments, skills and specialty hence organizations like which have adopted these have incorporate same in their organizational policies. Crafting and maintaining organizational waste management policies are necessary for the purposes of monitoring and evaluation in order to ensure that set objectives of the policies are achieved.

In as much as sustainable resource utilization and waste management have become global phenomena even among hotels organizations, it is assumed that hotels in Nigeria are yet to be seen to have aligned themselves to this trending move of sustainable enterprising through the adoption of sustainable resource utilization and waste management practices as literature have no evidence that hotels in Nigeria and in Bauchi State in particular have adopted same. The question then arises as to whether or not these hotels have organizational sustainable waste management policies and if they do, what are the factors which militate against the implementation of sustainable resource utilization as well sustainable waste management methods in these hotels. This forms the basis for this study and is based on Ajzen and Fish be in (1975)'s Theory of Planned Behaviour, which is based on the premise that individuals make logical, reasoned decisions to engage in specific behaviours by evaluating the information available to them.

Ryan (2010) argues that intentions are strongly related to behaviour and that behaviours that are goal-oriented usually result from reasoned processes. Based on the Theory of Planned Behaviour therefore, this study proposes that hotels' adoption and engagement in goal oriented sustainable resource utilization and waste management methods are dependent on their intentional and planned decisions articulated in the forms of organizational waste management policies.

Literature Review

Hotel is defined by fandbfood.com as a place where the accommodation system to stay night with the facilities food and beverage is available. In Nigeria, hotel business is witnessing a steady growth. In 2012, Augusto and Co (2013) reported that hotel business in Nigeria boasted about 6,000 hotels nationwide with an estimated room supply of 60,228. Local brand hotels supplied about 91% of total rooms, while international brand hotels supplied about 9% of the nation's hotel rooms. The report also revealed an estimated average occupancy rate of 60%. Similarly, the Zonal Office of the National Tourism Development Corporation in Bauchi

State published a 42% increase in the number of registered hotels providing more than 100,000 rooms (NTDC, 2015).

Apart from contributing significantly to the socio economic development of the nation, hotels also contribute a sizable portion of the huge amount of waste discarded annually in Nigeria and in Bauchi State. This is inevitably so as large volumes of waste are produced from the different departments and units of hotels including guest rooms, bathrooms, kitchens, lounges, restaurants, bars, laundries, offices, purchasing departments, conference rooms and gardens (Pirani and Arafat, 2014). Waste as observed by Baker (2015) come from guest's amenities such as soap wrappers, tissue cardboard rolls, aluminium cans, bottles, newspapers and magazines among others. Pirani & Arafat (2014) observes that averagely, a guest creates upwards of 1kg waste per night. These multiplied by the number of guests in an hotel and then by the number of hotels in a country and around the world, sum up a significantly huge amount of waste.

Hotel Business and Sustainable Environment

The world is increasingly confronted with a number of environment challenges including global warming, resource depletion and pollution (Mensah, 2014). Globally, the consequences of degraded environment are already being experienced in the forms of global warming which causes rise in sea levels, climate change, increased frequency and severity of natural disasters. Regionally, as reported in (World Bank Group, 2013), most impacts of climate change are materializing in the forms of climate variability such as the present high variability of seasonal and annual precipitation and climate extremes such as floods and droughts. In some arctic regions, climate change affects every facet of life and existence such as agricultural food production, security and health. The sub-Saharan Africa region (where Nigeria is located) is known to be the worst hit and at the receiving end, being also battered with severe poverty implications of climate change (World Bank, 2013).

Some of the recommended measures of mitigating climate change effects, protecting and conserving the environment suggested by World Bank (2013) include conservation of biodiversity and wetland ecosystems, enhancing sustainable agriculture practices, promoting use of renewable energy, being energy efficient, reduced gas flaring and switching to multi-modal transport systems (such as elimination of high-mileage polluting vehicles). Other measures of mitigating climate change suggested are through urban planning and use of sustainable building materials and products, promoting integrated energy-water management, reducing and managing urban air pollution, training programs that promote environmental protection, measures, and sustainable waste management strategies which should promote the collection and use of landfill gas (methane) for use in power generation, energy-efficient solid waste collection, waste stream separation and materials recovery, and composting. (World Bank Strategies, 2010).

The global perspective concerning production and consumption is pointing to an alarming situation in terms of pollution and inability of management and storage of discarded products as observed by Martinuzzi & Montevocchi (2014), and the hotel industry is one of those

leading industries which has been quick to recognize the plight of the environment (Rahman, Park and Chi, 2015). (Chen and Peng, 2012). Leading hotel chains along with independent properties of all sizes are adopting improved and better operational practices and processes that contribute to a sustainable environment through the development of ecological improvements. These are hotels that are nature-oriented, environmentally focused and environment friendly (that is eco-friendly) in use of energy, water, and materials that do not exacerbate impacts on the earth and environment (Suki and Suki, 2015)

The Hilton chain of hotels is an example of hospitality outfit which has successfully implemented an environmental management program known as “We Care”, through this program, seventy Hilton properties in continental Europe were able to reduce energy use per square meter by 15 per cent, reduce water use and carbon dioxide emissions per guest night by 8%. It has also successfully educated and involved more than 16,000 employees in three years. The Marriott International group of hotels has also through its “Spirit to Preserve” program, been able to within two years, reduce energy consumption by 11%, greenhouse gas emissions by 10.7% and water consumption by 8.2% per available room (Marriott International, 2011). [Credible certification programs such as Leadership in Energy and Environmental Design \(LEED\), Green Key, Green Seal, Green Leaf, The Green Tourism Business Scheme \(GTBS\) among others necessitate hotels to establish innovative environmental practices](#) (Geerts, 2014); (Rahman, Park and Chi, 2015)

Definition of Waste

Waste is anything unwanted or undesired material or substance. There are three categories of waste. There are those which are unavoidably generated because they are those parts of items that cannot be used or consumed such as banana peels; wastes generated as by-products of production or manufacturing processes such as grey water; or things that are underutilized, used inefficiently or inappropriately (Cambridge Dictionaries Online, 2014); (Macmillan Dictionary, 2015). Waste can be in the forms of solids, liquids, or as emissions. No matter the category or form of waste, all have negative impacts on the environment, on natural resources and consequently on human livelihood.

Waste Generation in Nigeria and in Hotels

The hotel business is a major waste producer. Mensah (2014) asserts that hotels contribute to these environmental problems. The lodging industry according to Sharman (2015) contributes about 7 million tons of waste discarded annually in North Carolina. Waste generation in hotels is unavoidable because resources are always being used either in production or during consumption. Items discarded by guests are not the only waste materials produced by a lodging facility. Hotel operations discard wastes such as cardboard boxes, plastic and glass bottles, aluminium and steel cans, cooking oil, office papers, yard waste and debris from construction and demolition. (Sherman, 2015). Goonan, Miroso, and Spence (2015) confirmed that a major sustainability challenge in the foodservice industry is the volume of food waste the sector produces. The hospital sector has been identified as a major contributor to the food waste stream.

Waste Management

Waste management according to Pianosi (2012) is “the collection, transport, processing or disposal, managing and monitoring of waste materials.” Wastes are usually products of human activities and can either be solid, liquid, gaseous or radioactive. Waste become a mendacious source of environmental and health hazard when not properly disposed of. Solid wastes in Nigeria are usually dumped on garbage sites, buried in landfills or burnt in incinerators. Liquid wastes are often released into bodies of water (causing water pollutions) and gaseous waste released into the atmosphere, causing air pollution. These methods of waste management are considered unsustainable as they pose a number of negative environmental, social and economic consequences. Waste disposal if not sustainable, will have negative implications for future generations. (Gbadeyan and Omolekan, 2015); (Martinuzzi and Montevecchi, 2014). The essential objective of all provisions relating to waste management should be the protection of human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping. (Martinuzzi and Montevecchi, 2014; World Bank, 2013; Chen and Peng, 2012)

From the foregoing, it can be construed that improper uncontrolled waste generation and improper waste management is a threat to the environment yet hotels are dependent on a healthy, attractive and resourceful natural environment to be able to attract, satisfy and retain customer patronage hence the need for sustainable waste management practices. Sustainable waste management is defined by Pianosi (2012) as “using material resources efficiently to cut down on the amount of waste produced and where waste is generated, dealing with it in a way that actively contributes to the economic, social and environmental goals of sustainable development”.

Sustainable Waste Management Methods

Sustainable waste management methods include total avoidance of waste generation, waste reduction, waste reuse, waste recycle and converting waste to energy. Corvellec & Hultmam (2012) advocates that there is need to reduce not only the volume of waste sent to landfill but, more fundamentally, the volume of waste that is produced. Recycling, energy efficiency and environmentally beneficial technologies such as vermin composting, grey water systems, biogas generation, solar power and heating systems are the recommended methods of sustainable waste management by (Conserve National Restaurant Association, 2014:3) (Conserve National Restaurant Association, 2014:5) (Corvellec and Hultmam, 2012). In the same vein, Pariatamby and Tanaka (2014) supports that that sustainable waste management begins from environmentally friendly products. A product which is environmentally friendly is assessed based on the amount of resources needed not only for its materials and its manufacture but also its distribution, consumption and disposal, the level of possible negative effects on health, environment, as well as pollutants and greenhouse gases emitted into the air and water.

Hotels Waste Management Policies

Policy according to the Cambridge online dictionary is a set of ideas or a plan of what to do in particular situations that have been agreed to officially by a group of people, a business organization, a government, or a political party (Cambridge University Press, 2017).

According to Irungu (2015), environmental policies on their own are not enough but require management support to ensure implementation at all levels. How wastes generated by individual hotels are managed is expected to be deliberate, thought-out issues which should be agreed on by the waste generating organization. It should be an agreed plan of action which is well communicated to all parties involved in the organizations waste management affair which in this case comprises of the top and line management team of the hotels, adequately communicated to members of staff. (Mensah, 2014) (Walker, Seuring, Joseph and Robert, 2014).

In order to tackle the environmental impacts of hotels operations and improve their environmental performance, Rahman, Park, & Chi (2015) recommends the formulation of innovative hotels' organizational policies on sustainable waste management. These not only require managerial action but also involve both employees and guests. Some features of a good policy as outlined by ebrary.net (2014) include helping in achieving the organization's waste prevention and management objectives, should be unambiguous, providing broad outlines and scope for subordinates' interpretation, should not be mutually contradictory having inconsistencies with other policies which may result in confusion and delay in action and should be sound, logical and flexible, giving room for future planning, expansions and modifications. Further, organizational waste prevention and management policies which should reflect the internal and external business environment should as far as possible be in writing, and the language be intelligible, clearly understood by the persons who are supposed to implement them and who are to be affected by them.

Ebrary.net (2014) also recommends that to ensure successful implementation of the policies, the top managers and the subordinates who are supposed to implement them must participate in their formulation and should be periodically reviewed in order to see whether they are to be modified, changed or completely abandoned.

Methodology

Study Design

The objective of this study was to investigate whether or not classified hotels operators have and implement sustainable resource utilization and waste management policies in their hotels. The study was carried out in Bauchi State, situated in the north-east geographical zone of Nigeria. Cross sectional descriptive survey design was adopted to achieve the study objective.

Population of the Study

There were two population categories for the study. The first category was of all sixty-five registered hotels in Bauchi State from where respondents for the study were drawn. Of these, only 49 were classified under the 5 classifications adopted by the states' branch of the National Tourism Development Corporation (NTDC). The five classifications are International, National, Urban, Sub-urban and Rural classifications. Three hotels fall under the International classification. Seven under the National, Fifteen under the Urban, eleven under the Sub-urban and thirteen under the rural classifications. One hotel from each of the five

classifications was used to pre-test research instrument and so were not included in the study. This puts the number of eligible hotels for this study at 44. Two hotels declined participation in the study which puts the number of available hotels for the study at 42.

The second population category was of the respondents which comprised of hotel managers and departmental heads. The resource utilization and waste generating departments used for this study with sub units under them were the Housekeeping comprising guest rooms, public areas, lounges, conference rooms, gardens, maintenance and laundry; the Reception which is the Front Office; Food and Beverage comprising kitchen, restaurant and bars; and Accounts comprising of purchasing, human resource as well as sales and marketing units.

Study Sample and Sampling Method

Stratified and purposive sampling techniques were employed for this study. The 42 eligible hotels were stratified according to their classifications and respondents from the hotels were purposively selected. The respondents were grouped into two strata. The first stratum was of hotels' managers and the second stratum of departmental heads. A total of 42 managers and 116 departmental heads totalling 158 respondents were available for this study

Study Data Collection Instruments

A set of structured questionnaires for the departmental heads and interviews schedule for hotels managers both containing seven elucidating items were the main data collection instruments used for this study.

Results and Discussions

The main objective of this study was to find out if classified hotels in Bauchi State in North-East sub region of Nigeria have and are implementing organizational sustainable resource utilization and waste management policies. In order to achieve this objective, three types of data were collected. First, hotels operators made up of hotels managers and departmental heads were asked if their hotels have any form of written organizational policies on waste management. Second type of data was inquiring how such policies are communicated to employees and thirdly, data was collected to establish if the hotels' organizational policies contained included any of the five sustainable resource utilization and waste management methods. The results are as presented below.

Hotels having Organizational Waste Management Policies

For the first set of data under this objective, hotels managers by means of interview and departmental heads through questionnaires were asked if their hotels have any form of organizational policies on waste management. The responses for the two categories of respondents are presented on tables 1 and 2.

Table 1: Hotels' Managers who responded that their hotels have organizational waste management policies

Class of hotels	N	%
International (N=2)	0	0.0
National (N=6)	5	11.9
Urban (N=12)	4	9.5
Sub-Urban(N=10)	8	19.0
Rural (N=12)	5	11.9
Total (N=42)	22	52.3

Result on Table 1 shows that out of the 42 hotels involved in this research, only 22 managers, which is slightly half the number of managers (52.3) claim to have organizational waste management policies with the Sub-Urban classified hotels (8 out of 42 and 19.0%) being the majority. It is worth noting that none of the International classified hotels (0.0%) have any form of organizational waste management policies.

Table 2: Departmental heads who responded that their hotels have Organizational waste Management policies

Departments	Class of hotels										Total	
	International		National		Urban		Sub-Urban		Rural			
	Freq.	%	Freq.	%	Freq	%	Freq	%	Freq.	%	Freq.	%
H/keeping (N=34)	1	0.9	5	4.3	5	4.3	4	3.4	2	1.7	17	14.5
F and B (N=37)	1	0.9	5	4.3	9	7.8	3	2.6	4	3.4	22	19.0
Accounts (N=24)	0	0.0	4	3.4	5	4.3	2	1.7	0	0.0	11	9.5
Reception (N=21)	1	0.9	4	3.4	3	2.6	2	1.7	0	0.0	10	8.6
Total (N=116)	3	2.7	18	15.4	22	19.0	11	9.4	6	5.1	60	51.6

Result presented on Table 2 indicate that 60 respondents, which is slightly above half (51.6%) of the total 116 departmental heads involved in this study have indicated that their hotels have organizational waste management policies. The Urban classified hotels have the highest number being 22 out of the 60 (19%) respondents who indicated they have organizational waste management policy in place. The ratio of hotels managers to departmental heads who indicated having organizational waste management policies to those who responded they do not have is very close (52.3% and 51.6% respectively). However, while hotels managers in the Sub-Urban classified hotels are more departmental heads in the urban classified hotels are more.

Hotels Communicating their Organizational Waste Management Policies to their Employees

Organizational policies are articles of governance which directs how things are done in an organization. A policy can only be effective if properly communicated to those who are responsible for carrying out the dictates of the policy. It is for this reason that this study sought to find out from the hotels which have indicated that their hotels have organizational waste management policies. The respondents were requested to state whether or not they

communicate their organizational waste management policies to their members of staff who are expected to carry out the dictates of the policies and if they do communicate, to indicate the modes of communication which could either be verbally or through written documents. Hotels managers' responses are presented on table 3 while departmental heads' responses are presented on table 4

Table 3: Hotels' Managers' modes of Communicating hotels' organizational waste Management Policies to their Staff

Class of hotels	Verbally		Through written documents		Total	
	Freq.	%	Freq.	%	Freq.	%
National (N=5)	5	22.7	0	0.0	5	22.7
Urban (N=4)	2	9.1	2	9.1	4	18.2
Sub-Urban (N=8)	8	36.4	0	0.0	8	36.4
Rural (N=5)	5	22.7	0	0.0	5	22.7
Total (N=22)	20	90.9	2	9.1	22	100.0

Of the 22 managers who responded that they have organizational waste management policies, only two managers representing 9.1% of them say their policies are in written form and communicate same to their members of staff officially through written document while 90.9% of the managers communicate waste management policies to their staff verbally. It is believed that written documents are the best forms of transmitting information to staff in an organization as this serve both as document of reference and reminder. It also serve for clarity and useful for evaluation and adjustment.

In order to ascertain the claim by the two urban classified hotels managers that their policies are written documents, a copy of the document was requested during the interview. However, the two managers both claimed that the policies are embedded in staff appointment letters.

Table 4: Departmental heads' mode of communicating hotels' organizational waste management policies to staff

Modes of communication	Departments	Class of hotels										Total	
		International		National		Urban		Sub-Urban		Rural			
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Verbally	H/keeping (N=17)	2	3.3	5	8.3	3	5.0	3	5.0	0	0.0	12	21.6
	F and B (N=22)	2	3.3	3	5.0	4	6.7	2	3.3	1	1.7	11	20.0
	Accounts (N=11)	0	0.0	3	5.0	3	5.0	1	1.7	0	0.0	7	11.7
	Reception (N=10)	0	0.0	3	5.0	3	5.0	1	1.7	0	0.0	7	11.7
	Total (N=60)	4	6.6	14	23.3	13	21.7	7	11.7	1	1.7	37	65.0
Through written documents	H/keeping (N=17)	0	0.0	0	0.0	2	3.3	0	0.0	1	1.7	3	5.0
	F and B (N=22)	0	0.0	2	3.3	5	8.3	1	1.7	3	5.0	11	18.3
	Accounts (N=11)	0	0.0	1	1.7	2	3.3	1	1.7	0	0.0	4	6.7
	Reception (N=10)	2	3.3	0	0.0	0	0.0	1	1.7	0	0.0	3	5.0
	Total (N=60)	2	3.3	3	5.0	9	14.9	3	5.1	4	6.7	21	35.0
Total		6	9.9	17	28.3	22	36.6	10	16.8	5	8.4	60	100.0

Out of the sixty departmental heads who have organizational waste management policies, 37, which are just a little more than half (61.7%) of them do communicate these policies to their staff verbally while 20 of them claimed that their policies are in written form. Comparing this

data with the one elicited from the managers however, the written document being referred to can safely be concluded to be the appointment letters served to members of staff at point of entry into the organization and what is being referred to as organizational waste management policies can be considered to be pieces of instructions given to the employees as their code of conducts as regards the hotels cleanliness.

Hotels Organizational waste Management Policies including Sustainable waste Management Methods

In order to ascertain if hotels organizational waste management policies include sustainable of waste management methods, respondents in the two categories were requested to indicate if their waste management policies included resource efficiency, waste reduce, waste reuse, waste recycle and waste to energy methods of waste management. The managers were also requested during the interview to indicate how each of these methods were being practiced in their various hotels. Their responses were to be compared with departmental heads' responses of whether or not their organizational waste management policies included the five sustainable methods of waste management

Resource Efficiency

When posed with whether or not their hotels policies included resource efficiency which involves absolute utilization of resources, avoidance of waste and harnessing of resources, all of the managers responded that it was impossible to avoid wastes and wastages. Their verbal responses included statements such as “waste cannot be avoided”, “waste is not easy to reduce”, “waste cannot be avoided only reduced by portion control”, “It is impossible to avoid waste in a hotel business”, “waste is inevitable”. Nineteen departmental heads representing 31.2% of those who claimed their hotels have organizational waste management policies however checked the “yes” option against resource efficiency in the questionnaire to indicate that their organizational waste management policies included resource efficiency. The data is presented on Table 5.

Table 5: Departmental heads' response to whether or not hotels' organizational waste management policies include resource efficiency

Departments	Class of hotels										Total	
	International		National		Urban		Sub-Urban		Rural			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
H/keeping (N=17)	1	1.6	3	5.0	4	6.7	2	3.3	0	0.0	10	16.6
F and B (N=22)	0	0.0	0	0.0	1	1.6	1	1.6	0	0.0	2	3.2
Accounts (N=11)	0	0.0	1	1.6	3	5.0	1	1.6	0	0.0	5	8.2
Reception (N=10)	0	0.0	1	1.6	0	0.0	1	1.6	0	0.0	2	3.2
Total (N=60)	1	1.6	5	8.2	8	13.3	5	8.1	0	0.0	19	31.2

This result is in consonant with managers' believe that waste in hotel business is inevitable and cannot be eliminated.

Waste Reduction

Managers through an interview and hotels managers through questionnaires were requested to indicate if their organizational waste management policies included waste reduction. Their responses are presented on tables 6 and 7.

Table 6: Hotels' Managers' response to whether or not hotels' organizational waste management policies included waste reduction

Class of hotels	Freq.	%
National (N=5)	4	18.2
Urban (N=4)	5	22.7
Sub-Urban (N=8)	3	13.6
Rural (N=5)	6	27.3
Total (N=22)	18	81.8

Table 7: Departmental heads' responses to whether or not hotels' organizational waste management policies include waste reduction

Departments	Class of hotels										Total	
	International		National		Urban		Sub-Urban		Rural		Freq.	%
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%		
H/keeping (N=17)	0	0.0	1	1.7	1	1.7	0	0.0	0	0.0	2	3.4
F and B (N=22)	0	0.0	2	3.3	4	6.6	1	1.7	3	5.0	10	16.7
Accounts (N=11)	0	0.0	1	1.7	2	3.3	0	0.0	0	0.0	3	5.0
Reception (N=10)	0	0.0	0	0.0	3	5.0	0	0.0	0	0.0	3	5.0
Total (N=60)	0	0.0	4	6.7	10	16.7	1	1.7	3	5.0	18	30.1

Out of the 22 hotels managers who claimed that their hotels have organizational waste management policies, 18 (81.8%) of them indicated that their hotels policies included waste reduction and also 18 (30.1%) of departmental heads indicated same in the questionnaire. When asked to mention how their hotels achieve waste reduction, the study was able to categorise their responses under a single theme of portion control. It is also observed that the managers are more concerned about waste reduction in the food and beverage section as most of their waste reduction strategies were on food production and elimination of food wastages. Their verbal responses included “through appropriate portion control”, “through bulk purchases to reduce wastages”, “we do only A la carte order”, “we do thorough supervision of staff”, “We prepare foods to order to avoid wastage”, “No production without guests”, “we caution our staff against wastage”, “We give all departments only what is needed”

Waste Reuse

Waste reuse involves using wastage in but for other purposes after accomplishing the initial purpose it was intended for rather than discarding it. Hotels managers' and departmental heads' responses as to whether or not their waste management policies included waste reuse are presented on tables 8 and 9.

Table 8: Hotels' Managers to whether or not hotels' organizational waste management policies include waste reuse

Class of hotels	Freq.	%
National (N=5)	4	18.2
Urban (N=4)	5	22.7
Sub-Urban (N=8)	3	13.6
Rural (N=5)	6	27.3
Total (N=22)	18	81.8

Table 9: Departmental heads' responses as to whether or not hotels' organizational waste management policies include waste reuse

Departments	Class of hotels										Total	
	International		National		Urban		Sub-Urban		Rural			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
H/keeping (N=17)	0	0.0	0	0.0	2	3.3	1	1.7	1	1.7	4	6.7
F and B (N=22)	1	1.7	2	3.3	2	3.3	1	1.7	0	0.0	6	10.0
Accounts (N=11)	0	0.0	0	0.0	2	3.3	0	0.0	0	0.0	2	3.3
Reception (N=10)	1	1.7	1	1.7	1	1.7	0	0.0	0	0.0	3	5.0
Total (N=60)	2	3.3	3	5.0	7	11.7	2	3.3	1	1.7	15	25.0

Out of the 22 managers who claimed that their hotels have waste management policies, 18 (81.8%) of them indicated they have included waste reuse strategies in their organizational waste management policies while only 15 (25%) of the departmental heads have indicated including waste reuse in their organizational waste management policies.

When requested to state how hotels reuse their wastes, the 18 hotels managers who had mentioned that they reuse waste in their hotels say they “use guest left over tissues in staff areas”, majority of the hotels “give food remnant to those who own dogs”, others say “plastic bottles are sold to those who have use for them.” It thus can be concluded that the main way by which hotels reuse waste is by giving out empty plastic water bottles and food remnants to people who have secondary use for them. By this result, it is apparent that the hotels do not reuse wastes for themselves. The wastes are being reused by other people outside the hotels who come to request the wastes from the hotels for their own personal use.

Waste Recycle and Energy Recovery

Neither hotels managers nor departmental heads confess to having any policies on waste recycling or energy included in their organizational waste management policies.

Conclusion and Recommendations

This study was able to deduce from interview conversations held with hotels managers that their organizational waste management policies actually centre on maintaining sanitation of hotels premises. For example, when requested to mention what their organizational waste management policies entail, some of the managers responses were “Do not allow degradable waste to stay longer than two days”, “Pick litter as you go”, “Do not litter”, “The place must be kept clean at all times”, “Waste must not be near the hotel, must be covered, must not be

allowed to pile”, “Always keep Hotel clean at all times”, “No written policy but we make sure our environment is kept clean”, “Policy is that wastes must be dropped in dust bin and not be littered” “Our policy is that we do not allow waste to pile up so much within our premises. That is why we employed private waste managers because the government vehicles do not come all the time”, “To make sure we clean our environment everyday”. These above verbally stated policy statements do not reflect that hotels cognizant of the five sustainable waste management methods presented to them in this study.

From the results presented in this study, the following conclusions were arrived at;

1. That hotels in Bauchi State in the North-East region of Nigeria do not possess any crafted written document that may be referred to as organizational waste management policy, and do not spell out their waste management responsibilities to employees
2. That hotels do not give any written document to their staff which spells out their waste management responsibilities and that hotels employees are given verbal instructions concerning waste management,
3. That the documents being referred by some of the hotels to be their written waste management policies are the appointment letters served to members of staff at point of entry into the organization and what is being referred to as organizational waste management policies are actually pieces of instructions given to the employees as their code of conducts as regards the hotels' cleanliness.
4. From managers' response to what constitute their hotels' waste management policy statement, it can be safely concluded that what hotels' operators in Bauchi State refer to as organizational waste management policies are actually sanitation instructions which are mostly centered around keeping the hotel environment clean.
5. Another conclusion of note is that hotels managers believe waste and wastage cannot be eliminated or avoided. With this type of believe, managers may not make concerted efforts to eliminate waste in their day-to-day operations.
6. This study concludes from the results of the study that hotels in Bauchi State in the North-East region of Nigeria have not included any of the suggested 5Rs sustainable waste management methods in their unarticulated organizational waste management policies.
7. The study also concludes that waste reduction in the hotels centered mostly on food wastage while waste is reused by people from outside the hotels and not deliberately by the hotels themselves.
8. It is concluded that hotels in Bauchi State in the North-East region of Nigeria do not practice waste recycle and energy recovery method of sustainable waste management

From the foregoing, considering that hotels in Bauchi State in the North-East region of Nigeria do not possess any framework on sustainable waste management and the possible implication that their waste management strategies are unsustainable, this study makes the following recommendations;

1. That hotels' operators be sensitized on the environmental implication of adopting unsustainable waste management strategies, and

2. That hotels operators be encouraged to craft and diligently implement waste management policies which must necessarily contain some, if not all of the sustainable waste management methods.

References

- Agusto & Co. (2013). *Fast growing Nigerian hotel industry succors hospitality business*. Retrieved May 4, 2015, from A Business Day Media Ltd. Website: www.businessdayonline.com: <http://businessdayonline.com/2013/04/fast-growing-nigerian-hotel-industry-succors-hospitality-business-agus>
- Baker, C. (2015). *A welcome sign: Hotels adopt reuse and recycling* *Waste Management World*. Retrieved June 7, 2015, from <http://www.waste-management-world.com/articles/print/volume-7/issue-7/features/a-welcome-sign-hotels-adopt-reuse-and-recycling.html>
- Cambridge Dictionary. (2015). *Waste*. Retrieved from <http://dictionary.cambridge.org/dictionary/english/waste>
- Chen, A., & Peng, N. (2012). Green hotel knowledge and tourists' staying behaviour. *Annals of Tourism Research*, 39(4), 2211-2216.
- Conserve National Restaurant Association. (2014). *Making the business case for sustainability*. Retrieved June 17, 2015, from Restaurant.org/Conserve.
- Florida Department of Environmental Protection. (2015). *Waste Reduction, Reuse and Recycling Green Lodging*. Retrieved May 3, 2015, from http://www.dep.state.fl.us/greenlodging/bmp_waste.htm
- Gbadeyan, R. A., & Omolekan, O. J. (2015). Relevance of green marketing on environmental degradation: An empirical study of consumers' of green products in Benin- City, Nigeria. *Mauritius Research Journal*.
- Goonan, S., Miroso, M., & Spence, H. (2015). Systems-practice framework: An integrated approach for foodservice management. *International Journal of Nutrition & Dietetics*, 72, 81–90.
- Irungu, R. W. (2015). *Determinants of management commitment to application of green practices in four and five star hotels along Kenyan Coast*. MSc Thesis. Department of Hospitality Management. Kenyatta University. Kenya.
- Manufacturing Skills Australia. (2015). *Waste management*. Retrieved June 14, 2015, from <http://sustainabilityskills.net.au/what-is-sustainability/sustainability-practice/operations/waste-management/>

- NTDC (2015). *Accommodation establishments*. Bauchi, Nigeria: Bauchi Zonal Office.
- Pianosi, M. (2012). *Sustainable waste | sustainable waste management*. Retrieved November 5, 2015, from <https://thelivinglabiesd.wordpress.com/2012/11/19/sustainable-waste-sustainable-waste-management/>
- Pirani, S., & Arafat, H. A. (2014). Solid waste management in the hospitality industry: A review. *Journal of Environmental Management*, 320-336.
- Rahman, I., Park, J., & Chi, G.-q. C. (2015). Consequences of “greenwashing”: Consumers' reactions to hotels' green initiatives. *International Journal of Contemporary Hospitality Management*, 27(6), 1054 - 1081.
- Repak. M. (2015). *Prevent and save. best practice guidelines in waste management*. Retrieved August 3, 2015
- Thomsen, C. (2013). Sustainability (world commission on environment and development Definition). *Cited in Idowu, S. O. (Ed) (2013) Encyclopedia of Corporate Social Responsibility* (pp. 2358-2363). BerlinHeidelberg: Springer.
- World Bank. (2013). *Combating climate change in Africa*. Retrieved from <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,contentMDK:22410211~pagePK:146736~piPK:146830~theSitePK:258644,00.html>