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ENVIRONMENTAL SUSTAINABILITY PRACTICES IN HOSPITALITY

INDUSTRY: THE CASE OF ADDIS ABABA HOTELS, ETHIOPIA

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Abstract

Hotel sector is one of the main components of the tourism industry. Despite the fact that hotels play a significant role in development, they also bring negative impacts on the environment by consuming natural resources and driving out wastes. To minimize the negative impacts, hotels need to implement environmental management practices. In the context of Ethiopia, studies are rarely conducted to examine the nexus between the hotel sector and the environment.

This research aimed to explore the operational environmental sustainability practices of Addis Ababa hotels. The study also analyzed the motivators and barriers of environmental practices within hotels. A mixed research design is applied to the study. Quantitative data were gathered from hotel managers through a self-administered questionnaire, and qualitative data were collected through the semi-structured interview from hotel stakeholders. Quantitative and qualitative data were analyzed through descriptive statistics and thematic analysis, respectively. The environmental practices indicators were examined under the groups of water-saving, energy-saving, green purchase, waste management, and creation of clean air. Within these groups, the installation of energy-efficient bulbs and key card/sensor for light; using energy-efficient appliances; regular maintenances of water and electric facilities; the installation of dual toilet and other low flow water technologies; placing of dust bins; sorting and disposing of solid wastes; buying of local products and employing smoke-free policy were implemented at certain extent. However, fundamental environmental practices indicators like alternative energy program; liquid waste treatment; water re-use; towel & linen re-use; rainwater harvesting system; composting of eco-wastes; recycling of materials; having a garden; eco-friendly purchase; and green building were still rarely practiced. Factors like the saving of hotel operational costs, hotel market competitiveness, and the contribution of modern technologies played a role in motivating hotel environmental practices. However, the lack of hotel owners' support, lack of formal environmental policy in hotels, lack of government support, absence of government regulation, and lack of sufficient physical infrastructure were the critical barriers to environmental practices. Therefore, environmental practices in the Addis Ababa hotels are still at the infant stage. The achieved practices were derived by benefit vests in hotel businesses rather than a commitment to the environment. Finally, recommendations were provided for hotel managers and owners, government, and other concerned bodies to guide the hotel's environmental practices.

Key words: *environment, hotel, environmental sustainability practice, environmental practice barriers, environmental practice motives*

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Acronyms and Abbreviations

AAC&T	Addis Ababa Culture and Tourism Office
CSA	Ethiopian Central Statistics Agency
Co₂	Carbon Dioxide
GDP	Growth Domestic Product
EIA	Environmental Impact Assessment
EIC	Ethiopian Investment Commission
GHG	Green House Gas
IHEI	International Hotels Environmental Initiative
IT	Information Technology
MoCT	Ethiopian Ministry of Culture and Tourism
Mt	Metric Ton
QA	Quality Assurance
UNCED	United Nations Conference on Environment and Sustainable Development
UNEP	United Nations Environmental Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	United Nations World Tourism Organization
WCED	World Commission on Environment and Development
WB	World Bank
WEF	World Economic Forum
WMO	World Migration Organization
WTTC	World Tourism and Travel Council

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CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Tourism industry has become one of the largest and the most influential among the global industries. It is a vital contributor to the economy of many countries as it creates jobs, initiates exports, and generates wealth across the world. According to the annual analysis of World Tourism and Travel Council [WTTC], (2018), in 2017 the tourism and travel show a 10.4% share of world GDP and 313 million jobs or 9.9% of overall employment. The tourism industry is made up of four basic sectors: attraction, accommodation, transportation, and ancillary services sales and distribution (Camilleri, 2018). Through contributions of all its components, the tourism industry brings more revenue and prosperity and mobility among different countries.

However, besides all these benefits and positive impacts, if not properly handled, tourism often brings issues that have negative and harmful impacts on society, economy, and the environment. Some of these negative impacts are revenue leakage from the local economy, waste disposal, air pollution, sound pollution, ecological disturbance of natural areas, damage to archaeological and historic resources, land degradation and biodiversity loss, depletion of natural resources and environmental risks due to poor planning and construction (Sunlu, 2003). The tourism industry has an impact on climate changes through greenhouse gas emissions into the atmosphere from transports, accommodation, and activities (Simpson, Gössling, Scott, Hall, & Gladin, 2008). According to the United Nations Environment Programme [UNEP] (2008), the contribution of the tourism industry toward climate change will be grown considerably by 2035. As Simpson et al. (2008) stated, in 2005, tourism associated activities were contributed to GHG emission by approximately 5% of global emissions, and out of this, 75 % was generated by the transport sector. Furthermore, as the accommodation sector is an intensive energy user, it is responsible for an estimated 21% of an emission generated from the global tourism industry in 2005 (Simpson et al. 2008). According to the World Economic Forum [WEF], the accommodation

cluster carbon emissions are expected to grow at 3.2% per year, will rise to 728 Mt CO₂ by 2035 (Chiesa & Gautam, 2009).

Sustainability is gaining focus as a crucial issue in the tourism industry due to the dependence of tourism on scarce natural resources, and there is an increasing demand by stakeholders to fulfill certain environmental standards (Shanti, 2016). Erdogan and Baris (2007) stated that environmental factors had received significant concern in the tourism industry. As a reason, environmental friendliness is the base for the establishment of sustainable tourism, and the concern given for environmental factors in the tourism industry initiates the emergence of green hotels (Hsiao, Chuang, Kuo, & Yu, 2014). In hotel environmental sustainability history, organizations such as World Commission on Environment and Development [WCED] (1987) and International Hotels Environmental Initiative (IHEI) (1992) are remembered for their initiation and acting as catalyst for greening hospitality practices (Kirk, 1998; Tzschentke, Kirk & Lynch, 2004; Park, 2009).

In the case of Ethiopia, the tourism industry has been growing over the years, but the issue of tourism sustainability has not been sufficiently addressed yet. However, there are starting of sustainable tourism development in the form of conservation of national parks, wildlife conservation areas, resort and ecology developments, eco-tourism development, biosphere conservation, and community-based tourism. So far, there is good starting but the sustainability practices progressing slowly due to many factors such as social, economic, and political situations.

As the main component of the tourism industry, the Ethiopian hospitality sector is also progressing well. Even though there are many challenges within the sector, the Ethiopian hotel industry is steadily growing since the last two decades Kifle (2012). According to ‘the study of hotel sector investment in Ethiopia, conducted by Gobena & Gudeta (2013), thirty-seven investors have taken an investment permit from Addis Ababa Investment Agency to invest in star-rated hotels in Addis Ababa. According to a survey study carried out by the W-hospitality group, currently, the number of international and regional hotel chains in the pipeline in Ethiopia has grown from 20 hotels in 2017 to 31 hotels in 2018, in which 25 hotel locations are in Addis

Ababa (Trevor, 2018). This study reveals that, currently, followed by Kenya, Ethiopia is leading East Africa in Hotel expansion. By this time, according to Ministry of Culture and Tourism, in Addis Ababa alone, there are more than 129 tourist recommended hotels. This study, therefore, aims to explore the environmental sustainability practices within the booming hotel industry of Addis Ababa.

1.2. Statement of the Problem

The hospitality sector is one of the basic components of the tourism industry. Ordinarily, the hotel is believed to be an industry with no significant impact on the natural environment compared to the other industries (Park, 2009). However, experts revealed that hotel sector is one of the leading business sectors that generate much negative environmental impacts in consuming both local and imported resources such as ample water, energy, and non durable products, and also produces wastes and emitting a carbon dioxide to air (Kirk, 1998; Bohdanowicz, 2006; Erdogan & Baris, 2007). The accommodation sector is an intensive energy user and responsible for an estimated 21% of an emission generated from the global tourism industry in 2005 (Simpson et al. 2008). According to the World Economic Forum [WEF], the accommodation cluster carbon emissions are expected to grow at 3.2% per year, will rise to 728 Mt CO₂ by 2035 (Chiesa & Gautam, 2009). It is estimated that in the average five-star hotels, a single guest consumes between 170 and 440litres of water per night, and an average hotel can release Co₂ from 160kg and 200kg per square meter of room floor area per year (Mbasera, Du Plessis, Saayman, & Kruger, 2016). On average, per one guest per night, hotels produce one-kilogram waste (Han, Hsu & Sheu as cited in Mbasera et al., 2016). As a result, hotels' environmental impact is considerable, and it stands out among other commercial buildings (Bohdanowicz, Zientara, & Novotna, 2011). Shanti (2016) claims the awareness of the preservation of natural resources is increased in the sector. So that Kasim (2007) underlined, an environmentally friendly operation is a must for hotels if they are to sustain increases in tourism. The major sustainable environmental practices in hotels are energy efficiency, and water conservation, liquid, and solid waste management, and sustainable hotel site development (Shanti, 2016).

Similar to other tourism destinations, despite plays significant roles in tourism development, the Ethiopian hotel sector also highly contributes to environmental challenges. Addis Ababa is a

capital city and the seat of many international organizations; for these reasons relatively, it is the location of concentrated hotels in Ethiopia. Comparatively, recently, the hotel sector is booming in Addis Ababa. In linked with these, it is expected that the negative impact of hotels on the environment also increases by the same rate as the hotel industry growth. In other cases, the studies have confirmed that the Addis Ababa's environment was highly threatened by pollution like water bodies due to untreated urban and industrial wastes; emissions from motor vehicles, construction, and residencies; and inappropriate landfills (Environmental Protection Authority [EPA], 2012; Pierre, Patrick & Wondwosen, 2016). According to EPA (2012), land degradation was another serious environmental challenge in Addis Ababa. The Ethiopian Ministry of Culture and Tourism [MoCT], (2015) ten year sustainable tourism development master plan identified some hotels environmental sustainability challenges like lack of zoning policy for hotel construction places; the concentration of hotels limited to city center; majority of the hotels are not built to international standards; and majority of hotels are staffed with under-qualified manpower.

To cope up with these undesirable environmental results, and the booming of the hotel industry, it is crucial to focus on the environmental issues. Whereas, the previously conducted studies in the Addis Ababa hotel sector were mainly concentrating on the areas of hotel marketing, service delivery, hotel manpower, customer satisfaction and other hotel business (Zelege, 2012; Andargie, 2013; Alelign,2013; Kifle, 2012; Gobena & Gudeta,2013; Gebregziabher, 2015; Trevor, 2018). These indicate that the issues of hotel environmental issues are the most ignored both among a few available Ethiopian tourism scholars and government. More than that, the environmental issues do not receive sufficient concern from the hotel industry itself and available academic centers such as universities and colleges.

To the knowledge of the researcher, no study has been conducted focuses on environmental management practices within the Addis Ababa hotel industry so far. As a result, there is a shortage of works of literature that exposes the information about environmental management in the Addis Ababa hotel sector. So the researcher believes there is a lack of explicit knowledge of environmental sustainability practices within the Addis Ababa hotel industry. Besides, the researcher identified the shortage of knowledge on the factors that were motivating and challenging these environmental practices as a research gap.

Accordingly, the researcher believes that a study must be carried out on environmental management practices within hotels in Addis Ababa.

Therefore, the purpose of this research is to examine the extent of the current environmental sustainability practices of Addis Ababa hotels. Additionally, the study also attempted to shed light on key driving motivations and barriers to environmental sustainability practices.

The researcher believed this study played a crucial role in contributing to generate knowledge by providing insights into the environmental sustainability management practices within Addis Ababa hotels and inputting the way forward for the Ethiopian hotel industry's environmental sustainability and green hotel.

1.3. Research Questions

The research addressed the following fundamental guiding questions;

1. What is the extent of current environmental sustainability practices' in Addis Ababa hotel industry?
2. What are the key motivating factors for environmental sustainability practices in the Addis Ababa hotel industry?
3. What are the major barriers of environmental sustainability practices in the Addis Ababa hotel industry?

1.4. Objectives of the Study

The study possesses dual objectives; a general objective and specific objectives.

1.4.1. General Objective of the Study.

The general objective of this study is to explore the environmental sustainability operation practices within the Addis Ababa hotel industry.

1.4.2. Specific Objectives of the Study.

More specifically the study aimed to:

1. Analyses the current operational environmental sustainability practices in Addis Ababa hotels
2. Identify the factors motivating of the environmental practice in Addis Ababa hotels
3. Identify the barriers of implementing environmental sustainability practices in Addis Ababa hotels

1.5. Significances of the Study

This research brings into attention the issues of environmental management in the hotel industry. The rationale of the study was to assess the environmental sustainability practices. And also study identifies barriers and driving factors of implementing environmental sustainability in the hotels. The study's finding holds significance for researchers, government, tourism companies, students, tourists, local community and other stakeholders. The significance can be categorized under academic, policy, and development significances.

1.5.1. Development Significance

The research findings have various development significances. As an example, for Addis Ababa city administration; the study findings can serve as a guide to plan the accommodation industry's environmental sustainability practices. Also the government can use the research results as a secondary data source of information to plan and to put future directions in accommodation sector development. In addition, the tourism companies or hoteliers can use the study's findings as references to planning for environmental management in hospitality to respond to the environmental challenges and; furthermore, the study finding helps to create awareness concerning the implementation of environmental sustainability practices in hotels.

1.5.2. Policy Significance

The research findings also have the policy significances. It serve the government or policymakers as a base to design policy, strategy, regulation or guidelines related to environmental management practices in tourism and hospitality. Hotel managers and hotel business owners can use the research results as a secondary data source of information and

benchmark to develop environmental policy in their hotel and; also the research recommendations can initiate the relevant government organs, hotels, and other institutions to introduce proactive policy measures concerning environmental management practices in the hospitality industry.

1.5.3. Academic Significance

The study can serve as reference material for the researchers who seek to conduct researches on environmental sustainability practices in the hospitality industry. The study is exploratory, it gives insight knowledge to the extent of the environmental sustainability practices and its challenges; and can serve as a base for other researchers to make further academic studies in the area and; in addition to that, researchers can do further research in the areas of environmental sustainability practices in hotels based on the indicated limitations of the study.

1.6. Scope of the Study

Scope of the study is delimited by the parameters of the geographical area, the theme, time boundary and the units of observation of the research. The hotels environmental management practices categorized in to two: organizational (system) sustainability practices and operational (technical) environmental sustainability practices. The main theme of the study was delimited to the hotels operational (technical) environmental sustainability practices. Whereas, the study not covered the hotels' organizational (system) sustainability practices. In addition, the scope of this study also covers the drivers and challenges of hotel environmental sustainability practices

Geographically, the study was conducted in Addis Ababa City Administration only. On tourist recommended hotels. The units of observation were the participants of the research from which relevant data were collected. The primary data gathered from the management of tourist recommended hotels found in Addis Ababa and selected hotel stakeholders. These stakeholders include Ethiopian Ministry of Culture and Tourism office, Addis Ababa City Administration Culture, and Tourism Bureau, Ethiopian Investment Agency, selected hotel consultancy companies found in Addis Ababa and Addis Ababa Sub City Culture and Tourism Office. The primary data collection from the field was undertaken in March-May, and the data analyses were continued until the end of September 2019.

1.7. Limitations of the Study

The study has various natural limitations. Though the hotels environmental concerns are very wide, the researcher uses the only indicator of operational practices with major variables only. But it is believed that the studied variables give a good view of environmental practices in Addis Ababa hotels. The future research can add the system practices and any variable from operational practices those not included in this research exhaustively. Another limitation of the study is the research responses are collected from only one person's opinion rather than an organization's response. Additionally, the study is conducted on tourist recommended hotels (star graded and preferred hotels) it is a little bit difficult to generalize and the result may not be applied to other small hotels. In this case, to get a comprehensive overview result it is recommended to undertake further study to generalize environmental practice in all hotels. Furthermore, this research was conducted from hotel managers' and stakeholders' points of view. In the future study, it is recommended to include the hotel customers' view to addressing the gap between what service provider-hotels perceive and service receiver-customers perceive in terms of the application of environmental sustainability practices. Though it is not considered as limitation, in nature, this research is a cross-sectional. So, longitudinal research is also suggested to observe the improvement of environmental practices and factors motives and barriers in hotels over a long period.

1.8. Organization of the Thesis

The thesis is organized into six chapters. The first chapter contains the background of the study, statement of the problem, objectives of the study, significance of the study, the scope of the study, limitation of the study and organization of the study. The second chapter presents with the review of related literature. The third chapter addresses about description of the study area and methodology of the study. The fourth chapter deals with the analysis and presentation of data. The fifth chapter is the discussion and interpretation of findings and finally, the sixth chapter is the conclusion and recommendations of the study. References and Annexes are also attached at the end part of this study.

1.9. Operational Definition

Environmental Sustainability Practices: it is an environmentally friendly initiative in hotel.

The environmental sustainability practices similar terms are green practice, green approaches, best practices, environmental practices and green environmental attributes.

Hospitality Sector: it is the combination of the accommodations, services; and food and beverage groupings, which collectively making up the largest segment of the tourism industry. The hospitality is an industry that depends on the availability of leisure time and disposable income.

Greening: it is a synonym for environmental or ecological, especially as it relates to products and activities aimed at minimizing damage to an environment (Ramey, 2009).

Tourism Industry: it is the set of industries which facilitate by providing infrastructure and products and services and make possible travelling for different purposes and travelling to places of leisure and business interests; it is all about providing necessary means to assist tourists throughout their travelling

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents the works of literatures related to the study. These literatures encompass the areas of tourism industry, the hotel sector, sustainability, sustainable development, sustainable tourism and sustainability in the hotel sector. And also this chapter addresses the environmental sustainability practices; as well as the motives and challenges of environmental sustainability practices in hotels.

2.1. Conceptual and Theoretical Reviews

2.1.1 Concepts of Tourism and Hotel

Travellers become tourists when they voluntarily travel out of their residence and working places to visit another environment. These individuals usually engage in various activities in the new environment, the destinations, regardless of how close or how far this environment (Hall, 2008). Therefore, these travellers are visitors, and what they do whilst visiting another place is considered as tourism.

Various tourism definitions has been provided by different authors and organizations based on their interest, background, and opinions. There is no universal agreement on the definition of tourism yet. For example, McIntosh and Goeldner (1986) say that "tourism can be defined as the science, art and business of attracting and transporting visitors, accommodating them, and graciously catering to their needs and wants". They also introduced the notion that tourism is interactive. These authors again defined tourism as "The sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments and host communities in the process of attracting and host in these tourists and other visitors". WTO (1991) defined tourism as "Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the

place visited.” Tourism contains the whole activities involved by travellers and the services provided for travellers during travel to destination, at the destination and from the destination. The definitions provided above indicate tourism has various components and elements. Camilleri (2018) identified four basic components of tourism sector: attraction, accommodation, transportation, and ancillary services sales and distribution. The focus of this study is also on the accommodation sector.

While studying tourism it is must to insight in to the accommodation sector; as it is the integral part of tourism industry in the destinations (Atul, 2008). The sector of accommodation is a highly disintegrated by its nature. It contains different forms of hospitality facilities which can be categorized into service (where catering is included) or self-catering establishments; service accommodation includes hotels, bed and breakfasts travel inns, and the like, and self-catering accommodation may include; campsites, caravans and holiday rentals of villas, apartments and chalets, among others (Camilleri, 2018; Walmsley, 2011). Accommodation is also referred as the hospitality sector; it is simply to mean the business of helping people to feel welcome and relaxed and to enjoy themselves. Hospitality sector is the combination of the accommodations, services; and food and beverage groupings, which collectively making up the largest segment of the industry. Hotels are the most dominant and widely recognized service providers for overnight tourists and business travellers (Camilleri, 2018). Hotels categorized based on different variables like size, location, by function, target market, amenities, service level, and form of ownership and industry standards.

In the book entitled *Ethiopian Hotels Rating Requirement and Classification*, Ethiopian MoCT (2014) hotel is defined as “a commercial establishment which provides rooms in which people can stay, especially travellers and sometimes to permanent residents, and which provides foods, lodging and other services for paying guests, including the general public”(P.2). Furthermore, literally, in Ethiopia hotel is a place where one can afford food, drink and bed, and a place where one takes rest and utilizes a leisure time in payment. Hotel industry, because of the nature of its functions, characteristics, and services, consumes more than average water, energy and non durable products, and produces large quantities of waste (Erdogan & Baris, 2007); as a result, from ecological perspective, hotels environmental impact is considerable and it stand out among other commercial buildings (Bohdanowicz et al., 2011).

Therefore, this study depends on the principle of tourism industry which affirms the hotel sector as integrated part of tourism. In the case of Addis Ababa tourism destination various category of accommodations are available. However, the study limited to mainly the large hotels of Addis Ababa.

2.1.2 Sustainability and Sustainable Development

The word sustainability has been widely used in the scientific field as a whole and in discussing the environmental science issues in particular (Filho, 2000). The author claims initially the term sustainability was used in the forest resources management in late 1970s. According to Mebratu (1998), the fundamental doctrine of sustainability concept is that the living of humankind in harmony with nature and society. Traditionally the term sustainability has the meaning of long term, durable, sound and systematic, among others (Filho, 2000). In the case of this study, sustainability is considered as a long term friendly operation.

The term sustainable development for the first time appeared after the United Nation's Stockholm Conference on the Human Environment in 1972 (Hsieh & Jeon, 2010). In the past decade, sustainable development is probably the most over used and confused concept due its application at various level of commitment, scope and business life (Ricord & Smith, 2009). In the Brundtland report, the United Nations' World Commission on Environment and Development defined sustainable development as "development that meets the needs of the present generation without compromising the ability of the future generations to meet their needs" (Brundtland, Harlem, Khalid, and Agnelli, 1987,p.41). According to these authors, the sustainable development has three core values: economic development, environmental protection, and Social equity. Forum of the Future in 2008 defined sustainable development as "a dynamic process which enables all people to realize their potential and to improve their quality of life in ways which simultaneously protect the Earth's life support systems" (cited in Ricord & Smith, 2009,p.2). According to Micioni (2009), both definitions are concern the basic thought of sustaining all generations through involvement of each group or individuals in make changes by sharing the responsibility of taking action to help our environment as a whole and to facilitate each generation to live with the required basic resources to proceed to next generation.

Therefore, in the context of hotel industry sustainable development is defined as *the booming of hotel sector while minimizing negative impacts and contributing positively to the local economy, society and environment.*

2.1.3 Sustainability in Hotel Sector

In the context of hospitality industry, the concept of sustainability performance is an operation and management of resources in manner that leads to the maximisation of the economic, social, and environmental benefits (Sloan, Legrand and Chen, 2013). Ricord & Smith (2009) explained that “sustainable development practically ranges from using energy efficient light bulbs to designing entire facilities and operational processes of a business in line with enhanced efficiency, sustainability of resources, and respect of local communities’ well being” (p.2). Many hotel companies have utilized social impact initiatives to improve the quality of life in local communities, the well-being of their employees and maintain the environment (Bohdanowicz, & Zientara, 2009). Abokhamis Mousavi, Hoşkara & Woosnam (2017) argued that, in hotel management decisions in besides to environmental and social, economic factors also play significant role in applying sustainability measure as the hotels financial performances determines their continuing in operation.

In addition to that, according to Lunkes and Rosa (2012), to promote sustainable development in hotels, it is crucial to have structures that satisfy the demands of gusts, efficient economic performance and develop responsible environmental practice. In respect to these, sustainable or green hotel aims to reduce their impact on society and environment which allows them meeting the needs of the present generation and at the same time it also helps to ensure the protection and enhancement of opportunities for future generations (Abdelrazaq, 2017). In more sustainability focus, hotels are becoming environmentally friendly through obeying environmental sustainability standards in their architectural design, management and customer service (Mishira as cited in Abokhamis Mousavi et.al, 2017). Therefore, this study concerned with the dimensions of hotels environmental sustainability.

2.1.4 Environmental Sustainability and Environmental Practices in Hotels

In these context, environment is the natural surroundings of the hotels, including air, water, soil, natural resources, flora, fauna and human beings, as well as their interactions. The concept of environmental sustainability in hospitality sector has been a serious issue in the decades (Doody, 2010). Micioni (2009) claims that the environmental arguments has many leaders explaining what to implement and the implementation procedures, however only few individuals are take responsibility of the situation, which causes the environmental responsibility practices passed from individual to business and vice versa. This is the reason for the existence of the concept of corporate social responsibility- the concern of community service and volunteerism; and also environmentalism in business including the hospitality industry (Micioni, 2009). Corporate social responsibility is the idea that companies ought to justify their existence more than just making for profit in terms of voluntary service for community (Bohdanowicz and Zientara, 2008).

While hotel industry has significance in the world economy due to its contribution to social and economic development, its operation can generate negative environmental impacts that can causes natural resources depletion and then global warming (Rosa & Silva, 2017). These harmful impacts on environments are caused by requirements for consumption of huge amount of water, energy, and disposable products in hotel operations (Erdogan, & Baris, 2007). The negative impact of hotels on environment pressurizes the governments and the tourism role players to reinforce eco-friendlier operation and green consumption in hotels (Moreo 2008). These push hotels to practice environmentally sustainable behavior to become eco-friendly hotels or green hotels, the commitments to apply ecologically-sound practices (Manaktola & Jauhari 2007). Lunkes et al. (2012) claim that to be environmentally sustainable, hotels should develop responsible environmental practices like measures to increase the energy efficiency, reduce water consumption, reduce green house gas emissions, solid and liquid waste management to minimize or to solve environmental problem.

Environmental management practices are a broad term encompassing broad range practices intended to reduce the negative environmental impacts of the organizations products and services (El Dief & Font, 2012); and also it refers to the extent at which the hotels seeks to implement

environmental initiatives (Park et al., 2014). Environmental practices can be categorized in to two dimensions: organizational or software and operational or hardware, or can be named as system practices and technical practices (Alvarez Gil, Burgos Jimenez, & Céspedes Lorente, 2001; El Dief et al., 2012). According to Park et al., (2014) “Technical practices are defined as an operational practices which reduce the negative impact on the natural environment and system practices apply to organizational activities that monitor and support environmental technical practices” (p.99). Hotel companies technical or operational environmental management practices are divided into three major areas: water conservation, energy saving and solid waste reduction (Kirk, 1995; Stipanuk, 1996). The operational (technical) environmental management improves the environmental practice of hotel as they directly involve in the modifications and change of both production and operation systems (El Dief et al., 2012.). Therefore, in terms of this research, the researcher focuses only on examinations of the operational practices such as water saving, energy saving, waste management, clean air and green purchase; that were being practiced in Addis Ababa hotel industry.

2.1.5 Hotel Environmental Operational Practices

2.1.5.1. Energy Efficiency

Hotel is one of the most energy intensive sectors in tourism industry and it shares significant percent in producing the emissions of carbon dioxide, particulates, sulfur oxides and nitrogen, and other air pollutants (Bohdanowicz, 2005). Fukey & Issac (2014) mentioned, compared to the other sectors of tourism industry, hotel sectors consume big amount of electricity. Bohdanowicz (2005) stated that energy saving is considered as the crucial initiatives in hotels, because comparatives to other buildings hotels consume higher energy than average. Energy saving provides an opportunities to reduce operational expenses (Park et al., 2014). The hotel sector can make significant contribution to the environmental sustainability by practicing certain measurements of reducing the consumption of energy that will in turn minimize the contamination and resource exhaustion (Fukey & Issac, 2014). Hotel industry can take various initiatives their operations to save energy and to enhance their performances. Hsieh et al. (2010) identified an energy saving practices such as Operate as much as possible in daylight; Use energy-efficient lighting (e.g., LEDs and compact fluorescent light bulbs); use the room key to control lighting; Adopt automatic off switches for all non-essential lights; install occupancy

lighting controls in hotel corridors; install a voltage optimization unit; install digitally programmable thermostats; purchase energy-efficient equipment. (e.g., condensing water heaters, dishwashers, and coffee machines); install time switches on vending machines; use renewable energy; and use alternate energy sources such as solar panels and wind power.

2.1.5.2. Water Efficiency

In hotel sector, water is used extensively for many different purposes such as kitchen, drinking, laundry, guest bathrooms and flow for space heating (Fukey & Issac, 2014). As the hoteliers are aware of using water conservation system, different water conservation practices have been developed and implemented in hotels which they consider it as a cost saving opportunities (Park et al., 2014). As a result, water conservation is increasingly become one of the core programs in environmental practices of hotel industry (Gabarda-Mallorquí, Fraguell, & Ribas, 2018).

Some the water saving strategies commonly implemented in hotels are installation of water efficient technology in taps (Gössling, Peeters, Hall, Ceron, Dubois, & Scott, 2012), awareness creation on water saving for guests and employee (Smith, Hargroves, Desha, & Stasinopoulos, 2009), and careful monitoring of water usage by automated water meter devices (Styles, Schoenberger, & Galvez-Martos, 2015). The effectiveness of water saving measurement can be fully achieved only at the commitments of both the hotel and guest. According to Gabarda-Mallorquí et al. (2018), some specific water saving measures such as bed linen & towel reuse and installation of dual-flush toilets require the active commitments of guests, and there are also some passive measures that require minimal involvements of guests such as the installation of water efficient technologies and wise use of water in hotel gardens, laundries, grounds and kitchens. The maximum water conservation efficiency is achieved when both parties-hotels and guests, are committed to minimize water waste (Manaktola et al., 2007). The water conservation practices identified by Hsieh et al., (2010) includes; install flow-flush or double-flush toilets; reduce toilet tank volume; use waterless urinals; use water saving showerheads, sink aerators, and diverter valves; apply xerogardening techniques for watering plants; install ozone laundry systems (water- and energy-efficient); adopt linen reuse programs; and detect and repair drips and leaks in guests' rooms'

2.1.5.3. Waste Management

Hotels produce large amount of wastes as they use huge amount of consumer goods which can cause probably the most visible effects on the environment of from hospitality industry (Bohdanowicz, 2005). Omidiani & Hashemi Hezaveh (2016) claim that hotels are one of the major sectors in generating solid wastes in to the environment. Hotel wastes are divided into liquid and solid waste as well as hazardous and non hazardous. Typical non hazardous wastes generated in hotels are household wastes of kitchen; paper, plastic, metal, glass, cardboards of packing, cloth, wood and organic wastes-such as fruits (Zein, Wazner & Meylan, 2008). Zein et al., (2008) identified some hazardous waste type such as frying oil, mineral oil, pain and solvent residues, flammable material (gas, petrol, etc.), fertilizers and chemicals (insecticides, fungicides, herbicides), cleaning chemicals, ink cartridges, IT disks and CD, batteries, cleaning chemicals and solvents used in dry cleaning, fluorescent lights, neon tubes and long life bulbs.

The waste management practices should focus on the recycling of solid wastes and composting of organic wastes (Park et al., 2014). Bohdanowicz (2005) claims majority of hotels practice the waste sorting and recycling programs. In order to reduce the volume of wastes in hotel, Kirk (1995) devised the hierarchy called waste minimization which listing from undesirable to most recommended method-from down to top, which are landfill (most damaging), incinerate (recover energy content), recycle (recover material for reuse), reuse (reuse the material with no processing), minimize (use minimum packaging, eliminate waste). According to the study of Hsieh et al., (2010) the most effective waste management practices includes placing recycling bins throughout the property; use one-stream recycling bins; install cardboard compactors to reduce waste volume; sort waste; build water treatment plants to treat sewage water and grey water for reuse; place milk in jugs, sugar in shakers, and jam and butter in bowls (instead of using disposable packages); encourage guests to refill their bottles with tap water; donate leftover food to the needy & unused rolls of toilet paper to shelters; install green fuels bio-pods to convert used cooking oil to biodiesel fuel; and use key cards made of 50% recycled material.

2.1.5.4. Green Purchasing

One of the laudable efforts to environmental sustainable made by hotel is buying and selling green (Timothy & Teye 2009). Environment Council (2005) explained green purchasing as “the purchase of alternative products with improved recyclability, reduced packaging, greater durability, recycled content, higher energy efficiency, low pollution/toxicity or high degradability; and the minimisation of unnecessary purchases” (p.73). Green purchasing is associated with the procurement and use of locally produced foods and beverages, and environmentally friendly products (Mbasera et al., 2016; Takashima, 2017).

Buying green for hotels (Timothy & Teye 2009) encompasses the purchasing of biodegradable or eco-friendly products such as eating utensils, cleaning solutions, soaps and shampoos and toilet tissues which are crucial for guest houses and environmental sustainability. According to these authors, Similar to the guests’ room, for hotel administrative offices, kitchens and other operation areas accommodation enterprises should purchase recycled content indicators such as bags, stationary, toilet tissue, paper and plastic. Being sustainable is goes more than buying recycled and biodegradable products. It also involves the merchandizing of locally produced fresh foods and the hotel gifts like souvenirs and handicrafts that are produced with sustainable materials by local artisans (Timothy & Teye 2009). In green purchasing, locally produced food and food inputs are important as it contributes to environmental sustainability through the potential reduction of GHG emissions associated with food production and transportation (Gössling et al., 2011).

2.1.5.5. Clean Air and Green Building

The quality of indoor air and out air is linked to tourists’ health and level of hotel comfort (Kuo, Chiang, & Chiang, 2008). According to Pichon (1996), indoor air quality is “the quality of indoor air in terms of the proportions of normal air gases and the concentration of pollutions” (p. 119). The quality of air inside hotel buildings results from a combination of external atmospheric pollutants and internal activities (Pichon, 1996). The improvement of air pollution in hotels can begin with working on air quality. Using environmental friendly appliances and covering outside by garden can improve air qualities. (Hueng, Fei & Hu, 2006). In addition to that smoking has great role in air pollution. Studies have recommended hotels to have smoke free policies (Field,

1999; Scollo, Lal, Hyland & Glantz, 2003). To be effective on their aims in the hotel, guests want to stay in comfortable environment and employees too needs good air quality to be efficient and productive (Kuo et al., 2008).

Green building involves construction of resources efficient hotel buildings with modern technologies to save water and energy as well as to improve waste management (Chan et al., 2009). Due to its complicated architectural and engineering designing ((Mbasera, Du Plessis, Saayman & Kruger, 2017), green buildings are commonly perceived to be a lot more expensive than conventional buildings (Kats, 2003). To reduce the construction costs hoteliers choose to implementing and adopting low cost, simple projects rather than adopting complicated measures such as green building (Mbasera et al., 2017). According to Graci (2009) these kinds of problems are very common where there is lack of government regulations on the tourism industry, the focus on voluntary initiatives resulted in low regulatory pressures.

2.1.6 Motives and Barriers of Environmental Sustainability Practices in Hotel

2.1.6.1. Motives of Environmental Sustainability Practices

What motivates firms to adopt environmental management practices is one of the most significant aspects in the contemporary academic debate in which the review of the existing literature yields, with an obvious contextual bias toward developed world, contested theories and inconclusive findings (Dief, 2012). Hotels have various reasons and motivational factors to implement environmental management practices. Some of the most common factors mentioned in various researches are discussed as follows. Hotels are already aware of their significant impacts on natural environment which makes green practices essential rather than optional (Fukey & Issac, 2014); as a result, hotels adapt green management practices deliberately in order to minimize the negative environmental externalities associated with their operations (Jackson, 2010). Beyond being environmentally responsible, Zengeni, Zengeni & Muzambi (2013) stated three main driving forces hotels to be green which includes complying with government regulations; monetary or financial gains; and fostering positive public relations and marketing. Concerning with complying with legislation, for example in extreme cases some countries, impose financial penalties for a hotels noncompliance to green policies (Mensah, 2004).

Implementing environmental sustainability practices has been considered as a source of competitive advantage in hotels and hotels implements environmental policies preserve their destinations and consequently their first competitive level (Cortes cited in Mbasera, 2015). These motives are those related with the marketing and promotion such as attracting new target customers sensitive with environments, improving the image of hotels and the acquisition of competitive advantage over other hotels (Hillary, 2004; Tzschentke et al., 2004).

Finally after reviewing literatures Álvarez-García & del RíoRama (2016) observed the type of environmental practices adaptations and implementation motivations in two approaches. According them the first approaches are external factors that related to external pressures which can come from the market, society and government regulations. The second approach refers to the motivations related to internal improvement of the company that can be achieved with the implementation environmental management which leads to improved performance, productivity and profitability that can results to achieving a sustainable source of competitive advantage

2.1.6.2. Barriers of Environmental Sustainability Practices in Hotel

Environmental management implementations in the hotel sector can be constrained by many factors. Doody (2010) identified the barriers of implementing environmental practices in hotels such as knowledge deficiency, owner/manager attitude, human resources, finance, customer attitudes, operational, and legislation and accreditation system. Also in his study Chan (2008) identified six main factors that hinder hotels from adopting environmental management system in hotels which includes: lack of resources, lack of professional advice, lack of knowledge and skills, uncertainty of outcome, certifiers/verifiers, and implementation and maintenance costs. Other than hotel sectors, the barriers of environmental management system practices are also encountered in other fields. For example according to Levy & Dilwali, (2000), the lack of knowledge of effective conservation measures, limited capital budget, lack of knowledge of new technology, lack of institutional memory; lack of performance measures; difficulty in quantifying environmental gain and limitations in staff availability are the key barriers facing the facility directors on implementing the environmental practices in the university.

Similar to these factors, Quazi (1999) stated that the factors challenges the environmental management systems are lack of incentives to implement; legal ramifications; lack of total employee involvement; lack of management commitment cost of implementation; and unclear responsibilities of employees.

Environmental practices barrier factors can be considered under different categories. Chan (2008) divided barriers in to industry barriers and organizational barriers. According to this author industry barriers are capital costs, technical information, competitive pressures & configuration of current operations; and organizational barriers are factors including poor communication, employee attitudes, past practices and inadequate leadership. In addition that Hillary (2004) developed and categorized the barriers of environmental management system into internal and external barriers. The author stated internal barriers such as resources, attitudes and company culture, implementation understanding and perception; and external factors like certifiers/verifiers, economics, institutional weaknesses; and support and guidance. According to (Murillo-Luna et al., 2011) external environmental barriers are environmental factors which cannot be controlled by company such as certifiers, economics, institutional weaknesses and support and guidance.

2.2. Empirical Reviews

2.2.1. Environmental Sustainability Practice in Hotels

The available literature shows that various scholars investigated hotel environmental sustainability practices and attempt to evaluate its performances using various indicators. As example, here are few of empirical reviews with their indicators, methodologies and the tools utilized in the studies. Most of them were studied in developing countries. Mensah (2006) conducted an exploratory study on the environmental management practices of hotels Greater Accra region of Ghana. Mensah used the stratified sampling method, a sample of 52 hotel managers from the various categories of hotels in region completed questionnaires on the study. The finding shows that the most popular practices are the use of energy efficient light bulbs and re use of linen and towels. They also do not practice recycling too much. Mensah (2006) concluded that the environmental management issues remain a neglected area in Ghna hotels.

In the study of self catering accommodation environmental performances of Lake District National Park of UK, Leslie (2007) used questionnaire based extensive set of environmental performance indicators grouped under influencing guests' behaviour; purchasing policies and practices; recycling materials; energy efficiency; resource management; and Awareness, involvement and attitudes of the owners. According to Leslie (2007), there is an increasing concern for environments from tourism companies, but low attention from government and the business owners.

Erdogan and Tosun (2009) conducted study to explore the nature of environmental performance on the tourist accommodation in the Cappadocia Region, Turkey. Erdogan et al.(2009) collected data from 73 accommodation managers using survey questionnaire, by employing 39 environmental performance indicators which grouped under seven main categories such as architecture and landscape design, energy efficiency, waste management, water efficiency, environmental awareness and knowledge of management on environmental protection; that authors found low performance in all groups. The Mensah & Blankson (2013) study explore factors affecting environmental practices of hotels in Ghana using six key factors that accounted for the environmental performance i.e. the environmental knowledge, host community support, conservation project support, compliance with environmental regulations, waste reduction, and participation of voluntary programmes. The study reveals better standard and those with membership of the national hotel trade association had better environmental performance.

An exploratory study (Mbasera et al., 2016) conducted on green management of hotels in Zimbabwe and South Africa reveals that an excessive use of energy and water and absence of green management policies. The authors exposed that, though there was no green management policies; certain green management initiatives like energy saving, use of solar energy, paperless policy, saving water by re-use of towels, reuse of soap bottles and waste management are implemented Zimbabwe and South Africa. The study of Mishra (2016) conducted in Bangkok, Thailand entitled 'How green are our hotels?' shows that environmental management remains a neglected area in hotels. Mishra (2016) added that even the available environmental performances were only at point they do not want to compromise with guest comfort.

The study of Mbasera, du Plessis, Saayman, & Kruger (2018) in South Africa & Zimbabwe reveals that revealed that in most hotels green management policies are not available, yet green initiatives were implemented hotels mainly emerged from the motivation of cost reduction, employee edification, and business competitiveness. The authors underlined that, study made a contribution to the literature by examining the perceptions of hotel managers concerning the implementation of green hotel management. Furthermore, Mensah et al., (2013) summarized the hotels environmental performance indicators as follows;

There is no agreement among scholars on standard indicators for measuring the environmental performance of hotels. Whereas, the most popular environmental conservation practices are geared towards cost savings, waste management, recycling, energy and water conservation. While the voluntary environmental management such as eco-labeling and certification, are becoming popular; environmental practices are not popular. In addition to that Certification schemes such as ISO 14001:2004, ISO 14004:2004 and other voluntary environmental management systems are being increasingly adopted by hotel industry. (P.1215)

Therefore, bases on these former literature experiences the researcher tried to study the case of Addis Ababa, Ethiopia hotels environmental practices from the dimensions of energy efficiency, water efficiency, green purchase, waste management, and clean air & green design.

2.2.2. Motives of Environmental Practices in Hotels

Several researches have conducted to identify the main motivators of implementing environmental management practices in hotel companies (Chan and Wong, 2006; Bohdanowicz, 2006; Mensah, 2006; Tzschentke et al., 2008; Sucheran, 2013 and Álvarez-García et al., 2016).

The study on ISO 14001 implemetation in the hotel industry in Hong Kong SAR, China conducted by Chan et al. (2006) revealed that government regulation was the strongest motivator in hotel industries as environmental failures and failed to accept the environmental standards results in heavier penalties. Mensah (2004) also revealed in some countries unable complying with the legislation of noncompliance to green policies can impose financial penalties for hotels in extreme cases. These studies emphasized the regulations as one of the most influential external forces that drive hoteliers to adopt and implement environmental management. On the other hands, this indicates that the government pays sufficient attention for environmental protection.

A study conducted by Bohdanowicz (2006) examined environmental management in European hotels and found that while the reduction in operational costs is the most important driver, the demand from customers and improved public image were the second most important drivers for managers to adopt and implement EMS in their hotel operations. This was further revealed in the study of (Mensah, 2004) that argued cost savings and increasing benefits was one of the prime motivations on implementations of environmental management practices in hotels. This confirms that the hoteliers focus for economic factors and for the interest of customers plays a significant role in practicing environmental management.

The study of Sucheran (2013) at KwaZulu-Natal in south Africa, affirmed that environmental management practices in hotels and lodges were highly derived by desire of guests for environmentally-friendly products, compliances with regulations and the ability to earn public recognition; whereas the willingness of customer to pay higher prices for environmentally-friendly products and services was identified as the least influential factors in environmental management practices. In similar study, according to the investigation of Mensah (2006) in the Accra region of Ghana, hotels adapts environmental management practices aimed to achieve a safe and healthy environment; to provide quality service in clean environment and to reduces the cost of environmental hazards.

2.2.3. Hotel's Environmental Sustainability Practice Barriers

Hotel sector as a segment of tourism industry, has attempted over years to incorporate environmentally friendly practices in its operation (Jackson, 2010). However, it was hampered by various factors. According the finding of Leslie (2007), the environmental management commitment of Owners of self catering accommodation is overshadowed by the greater attention they being paid to attaining maximum financial returns like through cost saving. Leslie (2007) confirmed there was lack of support from the local authority for environmental management of self catering accommodation. A research carried out by Tzschentke et al. (2008) shows that limited awareness amongst hospitality business owners of their negative environmental impact have consistently been identified as a barrier to change. In the assessment of environmental performance of accommodations in the city of Mashhad, Iran (Aminian, 2012) find out that the

main problems of environmental performances were lack of awareness, lack of master plan among hotels, lack of using alternative renewable energy and increase in the usage of fossil fuels.

According to the study conducted by Mahachi, Mokgalo, & Pansiri (2015) in Botswana, the lack of financial resources and lack of space for further expansion were the major barriers that influencing adoption of renewable energy technologies. The Mishra (2016) study conducted in Bangkok, hotels conder cost-saving as a barrier for environmental management practices. In similar study of Aminian (2012), in the assessment of environmental performance of accommodations in the city of Mashhad, Iran; find out that among main problems hindering environmental performances, lack of awareness was one. Study conducted by Fukey and Issac (2014) assures that the lack of knowledge in relation to environmental performances combined with lack of support has widely been identified as major constraint in business organizations that do not have the necessary expertise to introduce environmental management systems management

The research of (Mbasera et. al., 2017) in South Africa & Zimbabwe reveals employees of hotel industries are resists green management initiatives as it is a new concept. They conclude that the managers lack idea on green implementation and how to make life healthier within the tourism environment. Furthermore, they reveals that affordability of green management initiatives like where construction of the hotel was conducted a few years ago when the building design were not concerned green building.

2.2.4. Ethiopian Hotel and Tourism Industry

As noted by Hailu Megersa (2015,p.13),

The history of modern hotel services in Ethiopia was traced back to the first decade of twentieth century, with the establishment of the first modern hotel by Empress Taytu. But the period of Italian occupation was regarded as a turning point in the history of hotel industry in Ethiopia. This was mainly because the establishment of hotels in the capital as well as in different regional towns of the country. International standard hotels were established in Ethiopia for first time during the Imperial majesty in the 1950s and 1960s

in response to shortage of accommodations for the growing number of international tourists. In 1974, with the coming to power of Derg regime the existing hotels were nationalized and put under the chain of administration from the centre under Ethiopian Hotels and Spas Corporation. Nonetheless, after 1991 these nationalized hotels again shifted hands to the private sector with market liberalization and privatization policy of EPRDF government.

Even though there are many challenges within the sector, Ethiopian hotel industry is steadily growing since last two decades (Kifle, 2012). According to ‘the study of hotel sector investment in Ethiopia’ by Gobena & Gudeta (2013), thirty seven investors have taken investment permit from Addis Ababa Investment Agency to invest on star rated hotels in Addis Ababa. According to a survey carried out by W-hospitality group, currently the number of international and regional hotel chains in pipeline in Ethiopia was grown from 20 hotels in 2017 to 31 hotels in 2018, which 25 hotels locations are in Addis Ababa (Trevor, 2018). This study reveals that currently, followed by Kenya, Ethiopia is leading East Africa in Hotel expansion. By this time, according to MoCT, in Addis Ababa alone there are about 129 tourist recommended hotels. However, literatures of several Scholars reported that Addis Ababa hotels are characterized by poor services delivery, low customer satisfaction and poor infrastructures (Gebregziabher, 2015; Andargie, 2013; Zeleke ,2012 and Alelign,2013). Ethiopia ranks among the most privileged nations of the world in terms of an endowment of natural and cultural resources. However, Ethiopia was unable to harness effectively from tourism and the tourism industry growth were remain slow.

Ajala (2008) discussed that, though Ethiopia is rich in tourism potential to facilitate development through generating income and creating employment, this potential has not been exploited to the required extent. The wise exploitation of available resource is hindered by the challenges like lack(s) infrastructure, lack comfortable roads, lack of consistent utilities like water, lack of people awareness and education how to treat the tourists on their stay, conservation problem of naturally tourist attractive areas (Robinson & Jonker, 2016). “Apart from the African game and cultural experiences available to visitors, Ethiopia has a rich array of historic and natural sites that are truly world-class” (World Bank [WB], 2006). Natural resources that include some of the

highest and lowest points in Africa along with immense wildlife including some endemic ones; cultural resources, a very old and well preserved historical traditions with fascinating stelae, churches and castles to witness that, an attractive cultural diversity of more than 80 nations and nationalities; and various ceremonies and rituals are some of the tourism resources potential indicators (Walle, 2010).

To mention UNESCO recognized Ethiopian tourism resources, there are twelve world heritage sites: Axum's obelisks, the monolithic churches of Lalibela, Gondar's Castles, the Omo Valley, Awash valley, Konso Cultural Land Scape, Tiaya Served Standing Stones, Semien National Park, the walled city of Harar, Ethiopian Meskel Festival of the finding of the True Cross, Fichee-Chambalaalla and Oromo Gada System. In addition to these, according to the MoCT (2015) the Ethiopian heritages registered on the UNESCO's World tentative list includes Bale Mountains National Park, Dire Sheik Hussein Religious, Cultural and Historical Site, Holqa Sof Omar: Natural and Cultural Heritage (Sof Omar: Caves of Mystery), Gedeo Mixed Cultural and Natural Landscape, and Melka Kunture and Bachilt Archaeological Site.

The Ethiopian tourism industry has been facing many challenges. The widely discussed challenges in pieces of literature are lack of infrastructure, lack of sufficient information, standard tourist services, shortage accommodations, security problems in some areas, lack of marketing, and ineffectiveness of the public sector to run tourism efficiently. Robinson & Jonker (2016) claim that Ethiopia's tourism industry has several challenges such as infrastructure is at its infancy; tourist products are poorly developed; difficulties of accessibility to tourist products and products are inappropriately expensive; there is a lack of marketing to attract tourists to the country, and lack of signage to tourist attractions and it is almost impossible to find brochures or maps of the city. "Several problems, including the high cost and poor quality of tourism services, have constrained the development of the tourism industry. Ethiopian tourism promotion also needs to overcome the images of drought, famine, and war that many foreigners associate with the country" (WB, 2006). According to Sintayehu (2017) Ethiopian tourism is facing the challenges of poor promotion performance, lack of road infrastructure, poor network facility in tourism destinations, lack hotel accommodations in tourist area, shortage of human trained power on the tourism sector and suffering from negative images; good hotel are mostly clustered in Addis Ababa only. These challenges are also confirmed by Andargie (2014). He revealed that

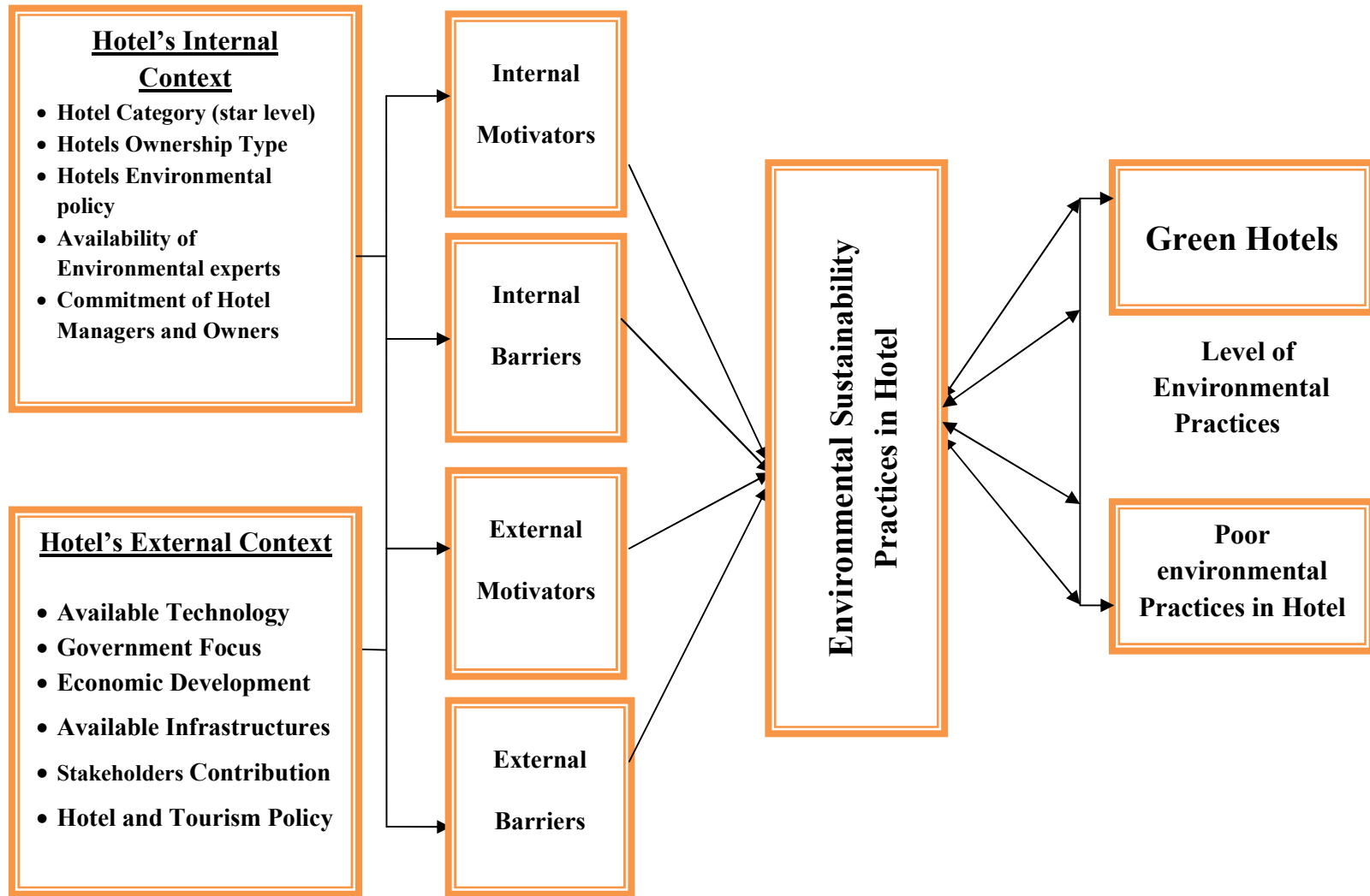
the absence sufficient infrastructure, problems of securities, lack of quality service and facilities, lack of conservation and protection of heritage, shortage finance are the major challenges of tourism development.

2.3. Conceptual Framework of Hotel Environmental Sustainability Practices

The conceptual framework indicates interlinks of environmental practices, environmental practices motivators and environmental practices barriers. And also addresses the sources of motivating and challenging factors. Mainly, the framework reveals the influences of motivations and barriers in creating environmental friendly hotels. Based on the extent of drivers and challenges, environmental practices in hotels can result in well-matured practices or poor practices. Other factors remain constant; the high level of environmental practice motivators and the absence (low level) of barriers can lead to good environmental practices-the green hotel. Inadequate environmental practices' motivators and the presence of uncontrollable environmental barriers can lead to poor environmental practices.

In the framework, the lines and rays emanated from internal and external hotel context boxes and directed to the boxes of barriers and motivators indicate that both the hotel environmental practices motivators and barriers are sourced from the hotel contexts. The unidirectional rays' start from the internal and external hotel environmental practices motivators and barriers boxes, and directed to the box of hotels environmental practice shows the influences of barriers and motivators on environmental practices in hotels. The bi-directional rays connecting the box of environmental practices and the box of the level of environmental practices shows that the level environmental practice results can vary from green hotel to poorly practiced environmental practices based on the level of influences of barriers and motivators.

Figure 2: 1 Conceptual Framework of Environmental Practices in hotels



Sources: Adapted from Mair & Jago (2010)

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter deals with the description of study area-Addis Ababa and the methodological procedures that were employed in the study. It describes Addis Ababa City briefly, where the study is carried out. Further, the chapter presents the research approach; data sources, tools and collection techniques; research population; data analysis technique; and the justification of instrument used in the data collection.

3.1. Background of the Study Area

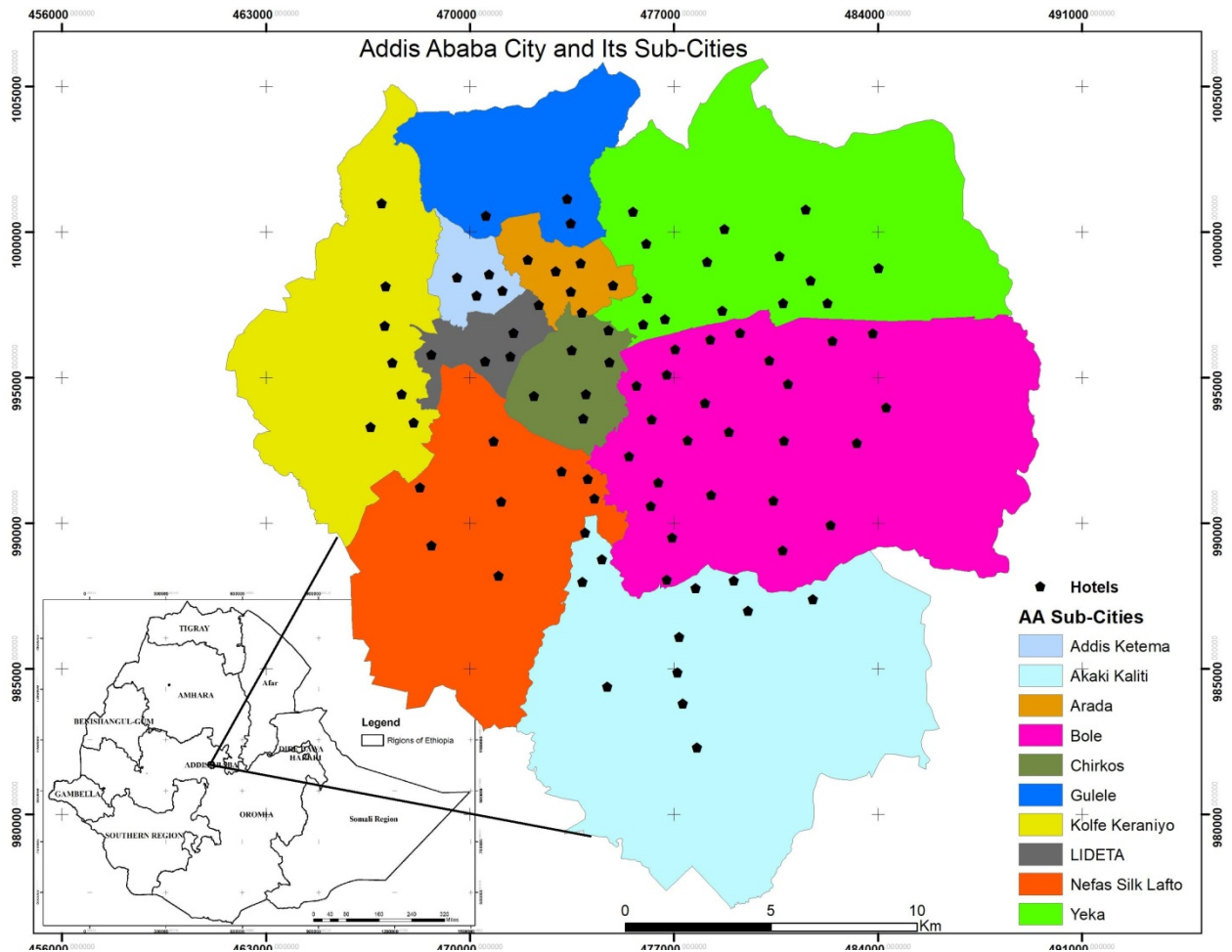
3.1.1. Geographical Location and History

Addis Ababa is located in the heart of the country at coordinates of 9° 0' 19.4436" N and 38° 45' 48.9996" E, which covers the area of 540 Km² from these, about 18.2 Km² are rural area ('Addis Ababa City Admin" n.d. para. 3-4). Addis Ababa, the capital city of Ethiopia was founded in 1886 by Menelik II (Tolon, 2008). According to the Ethiopian Government portal, Addis Ababa is the diplomatic capital of Africa and the seat of more than 92 embassies and consular representatives; as well as the city where the African Union (AU) and the UN Economic Commission for Africa have their headquarters ('Addis Ababa City Admin' n.d. para. 3-4).

3.1.2. Physical Environment and Climate

Situated at the foothills of Entoto Mountain at an elevation of 2,400 m (7,874 ft), Addis Ababa experiences mild climate year-round with the fairly uniform year-round temperatures (Pierre et al., 2016). These authors explained that the major seasons in Addis Ababa are defined by rainfall, with a dry season from October–February, a light rainy season from March-May, and a heavy rainy season from June–September with the average annual rainfall 1,200 mm (47.2 in). According to Pierre et al.,(2016), the average annual temperature in Addis Ababa is 16 °C (60.8 °F), with daily maximum temperatures averaging 20–25 °C (68.0–77.0 °F) throughout the year, and overnight lows averaging 5–10 °C (41.0–50.0 °F) (Pierre et al., 2016).

Figure 3: 1 Addis Ababa City Administration Map



Source: Own Construction

3.2. Research Methods

3.2.1. Research Philosophy

Research philosophy is a system of the researcher's belief following which new, reliable knowledge about the research object is obtained and it is a base for the choice of research strategy, formulation of the problem, data collection, processing, and analysis (Žukauskas, Vveinhardt & Andriukaitienė, 2018). Gringeri, C., Barusch, A., & Cambron, C. (2013) defined the research paradigm as a set of beliefs that guides the process of social inquiry. According to Gringeri et al. (2013), due to the influences of paradigms on the research method, instruments used and interpretations, it is very essential to state the research paradigm.

Creswell (2014) suggested that individuals developing a research proposal shall clearly indicate the larger philosophical ideas they espouse in their plan. Different group of researchers holds different approaches to worldviews. Creswell (2014) identified four paradigms with their elements that commonly discussed in the works of literature namely post-positivism, constructivism, transformative, and pragmatism. For a pragmatist, the starting point for his/her work is a problem and aims to contribute practical solutions that inform future practice (Saunders 2009). Creswell (2014) reflects pragmatism as follows;

Pragmatism is not committed to any one system of philosophy and reality. This applies to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research. Researchers are free to choose the methods, techniques, and procedures of research that best meet their needs and purposes. In a similar way, mixed methods researchers look to many approaches for collecting and analyzing data rather than subscribing to only one way (e.g., quantitative or qualitative). Thus, for the mixed methods researcher, pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis. (P.41)

In this study, the researcher followed the mixed method. The analysis also followed various methods both in quantitative descriptive statistics and qualitative thematic analysis. Therefore, it was found convincing that this study was designed to follow the pragmatism world view; that was applied to the analysis of the environmental sustainability practices of the Addis Ababa hotel industry.

3.2.2. Research Approach

According to Creswell (2009), research designs are plans and the procedures for conducting a study that covers all steps, including broad assumptions to detailed methods of data collection, analysis, and interpretation. Research design gives the overall outline of the research, and it provides a framework for the collection and analysis of data and subsequently indicates which research methods are appropriate (William, 2007).

Based on these assumptions, the researcher applied the descriptive design in the study. This approach used in order to explore and describe the characteristics of variables of interest in the study. So this design is found to be essential for this study because it helps to clarify points that presented in the study.

Creswell (2014) explained that there are three research design methods: (a) qualitative, (b) quantitative, and (c) mixed. Hence, the researcher used the mix of quantitative and qualitative research approaches.

3.2.2.1. Mixed Methods Designs

Creswell (2014) claims that the researcher not only selects methods (qualitative, quantitative, or mixed) to conduct study but also should decides on a type of study, which provide specific direction for procedures in a research design, within these three methods choices. Although many specific designs exist in the mixed methods field, convergent parallel mixed methods, explanatory sequential mixed methods and exploratory sequential mixed methods are commonly used in social sciences today. According to Creswell (2014), in the explanatory sequential approach:

The researcher undertakes two-phase project in which the researcher collects quantitative data in the first phase, analyzes the results, and then uses the results to plan (or build on to) the second, qualitative phase. The quantitative results typically inform the types of participants to be purposefully selected for the qualitative phase and the types of questions that will be asked of the participants. (P.274)

For this study, the researcher prefers to use explanatory sequential mixed methods. Taking the advantages of this design, the researcher firstly collected and analyzed the quantitative data utilizing the developed questionnaire. Next, the qualitative data collection was conducted by

interview guidelines developed based on the quantitative analysis result. The qualitative data was collected to support and triangulate the quantitative data.

3.2.3. Data Sources, Tools and Collection Methods

3.2.3.1. Data Sources

In this research, mainly the researcher depended on primary data Sources such as key informant interviews and questionnaire responses. To obtain information on hotels environmental sustainability data was gathered through a self-administered questionnaire survey and semi-structured personal interview.

3.2.3.2. Survey Instruments

The survey instrument has three main advantages; these were: the rapid turnaround in data collection; suitability to obtaining the targeted sample size; and the economy of the design (Creswell, 2014). The survey instrument was developed in two-phases. First, a self-administered questionnaire was developed to gather quantitative data easily from hotel managers. And then key informant in-depth interview guide was developed.

3.2.3.2.1. Self Administered Questionnaire

For the quantitative part, a closed-ended self-administrated questionnaire was developed after a comprehensive literature review of environmental sustainability practices in the hotel. Questions were listed in three different sections. (1) The dimension of environmental sustainability practices in hotels- this section contains five major sustainability practice dimensions and indicators: energy efficiency, water conservation, waste management, green purchasing, and clean air; (2) The factors motivating hotels to engage in environmental sustainability practices and; (3) the challenges of environmental sustainability practices.

The demographic characteristics of hotel managers and hotel background are factual information asked the respondents to check the category that they belonged to. However, one item- the position of the respondents requested that to provide actual position they held at the time of research by filling in the blank. All survey questionnaires used a 5-point Likert type. For environmental sustainability practice performance surveys, various indicators were given and respondents were asked to rate them on a 5-point *adjectival scale*: from “Never” to “very

frequently” (Mensah and Blankson, 2013; Alzboun, 2014). These Likert points help the participants to rank their responses. Therefore, a hotel’s environmental initiative performance was measured how well it performed on these Likert scales. Also, respondents were asked to rate them on a 5-point Likert scale from “Strongly disagree” to “Strongly agree” for sustainability practice motives and challenges.

3.2.3.2.2. Key Informant Interview Guide

Key Informant involves interviewing of the identified individuals who are likely to provide the required information and concepts on particular subjects solicited by an investigator (Kumar, 1989). According to this author, only an appropriate and a small number of informants which usually ranges from 15 to 35 are interviewed. The researcher developed key informant personal semi-structured interviews to gather data for the qualitative part. This semi-structured interview guide was developed based on data analysis results of the quantitative part. The interview questions cover all the research objectives: environmental sustainability practices in hotels; the factors motivating hotels to engage in environmental sustainability practices and the challenges of environmental sustainability practices.

3.2.3.3. Data Collection Procedure

The *cross-sectional* sample survey was undertaken through personal in-depth interviews and self-administered questionnaires. The data collection process was handled in two phases. First, primary data was collected through a self-administered questionnaire. For this part, based on the hotels' data received from the Ethiopian Ministry of Culture and Tourism Office, tourist recommended hotels were initially contacted and participation in the research requested. Based on their permission and consent, with a brief explanation, the self-administered survey questionnaire distributed to the representative of the hotels i.e. mainly the human resources, general managers and other consented managerial positions. After the distribution of one questionnaire per hotel, the researcher did intensive follow up through phone call and visit in person. While some hotels returned the questionnaire in a short period, there was some hotel which takes nearly a month to reply to the questionnaire. This data was collected from March 01- April 30, 2019.

Secondly, key informant interview participants were directly approached and contacted. Based on the consent of these informants personal interview was conducted at convenient places and time. The interview was deep and the voices of participants were recorded by a digital voice recorder. To get rich information the interview was conducted both in Amharic and English languages based on the interest of informants. This qualitative data was collected in May 2019.

3.2.4. Target Population

According to Banerjee & Chaudhury (2010), in statistics, a population is an entire group about which some information is required to be ascertained. For this study, two categories of the population were targeted. The first one was the tourist recommended hotels and the second was the selected stakeholders of hotels. For the quantitative data, the unit of analysis was geared to the top managers' of tourist recommended hotels found in Addis Ababa. The unit of analysis was strictly limited to top-level managers of hotels; because it is believed that the managers have a clear view of their company and can articulate more accurate and actual performances of sustainability practices in hotels.

For qualitative data, targeted population was hotels stakeholders. Key informants were both from public and private stakeholders. Key informant interviewees were from hotel stakeholders such as Addis Ababa City Administration Culture and Tourism Office, Ministry of Culture and Tourism Office, Hotel consultant companies, and Addis Ababa Sub City Culture and Tourism Offices. Hotel consulting company stakeholders were targeted because of the awareness they have towards of hotel industry as they are working with hotels through consulting, advising and guiding them on hotel business. The government Offices' stakeholders were targeted because of the awareness they have towards of hotel industry as they are working with hotels consulting, advising, supervising, guiding or giving license for hotel business. The research is more focused on Supply-side (hotels) and the suppliers' stakeholders.

3.2.5. Research Population

In this context, research population implies the sampled population for this research. For the quantitative and qualitative part, data was gathered separately from two different populations.

3.2.5.1. Research Population for Quantitative Data

Thornhill, Saunders, & Lewis (2009) claimed that it is possible that the researcher can collect data from an entire population if it is a manageable size. According to Thornhill et al. (2009), it is called census and but for all research questions where it would be impracticable for the researcher to collect data from the entire population, a researcher needs to select a sample.

In this research, the population is all tourist recommended hotels available in Addis Ababa City Administration. According to the data received from the Ethiopian Ministry of Culture and Tourism Office, there are 129 hotels those identified as tourist recommended hotels. All these hotels were surveyed by questionnaire for quantitative data input of the research. The researcher prefers to undertake the study on the entire population for: (a). the total number of tourist recommended hotel in Addis Ababa is small, well defined and manageable and; (b). to get the benefit of achieving the highest accuracy of data gathered from the whole tourist recommended hotels in Addis Ababa; to get a deep insight into the study objectives.

On these basis, self administered questionnaire were distributed for 129 hotels to capture the background of respondents, to assess environmental practice; and environmental sustainability practices' motivators, and challenges. Out of these 129 questionnaires, 123 were properly filled and collected. Therefore the survey's response rate was 95.3%.

3.2.5.2. Research Population for Qualitative Data

The targeted population of qualitative data was the selected hotels' industry stakeholders. The purposive sampling (expert sampling) technique was employed to select key informants for interviews from the targeted population. Key informant interviewees were selected experts from hotel stakeholders. The size for key informant interview participants was determined based on the available key informants and information saturation. Therefore, a totally of 15 (fifteen) key informants participated in the research.

3.2.6. Data Analysis Method

To achieve objectives of the study, this research data analyzed by mixed method research;- both qualitative and quantitative approach.

3.2.6.1. Quantitative Data Analysis

The data gathered through close-ended self-administered questionnaires were analyzed through descriptive statistical techniques. Descriptive statistical analysis was selected purposefully to present data in tables, percent, frequency, mean and standard deviation.

To analysis, the gathered data, on the first step, data were prepared for analysis by organizing into similar category (objectives): environmental sustainability practices, motivators of environmental sustainability practices and barriers of environmental sustainability practices. On the next stage, variables within each category were coded accordingly to avoid any confusion during analysis and to make any correction if required. After coding, the data was checked to prepare for analysis and to avoid any inconsistencies before moving on to the analysis stage. Following the completion of the data coding, data entered into Statistical Package for Social Science (SPSS) of 21.0 versions analysis. Finally, data analyzed in descriptive statistics that included summarizing and describing the data in subsequent tables or figures. The result of the analysis was interpreted and discussed using frequency, percentages, correlation and mean.

During the data description and analysis, in order to determine the extents of current environmental practices, identify environmental practices' motives & challenges, and to rank the identified variables in each group, the respondent percentage, frequencies and mean values were used. According to Brown (2011), "If a researcher presents the means and standard deviations (interval scale statistics) for individual Likert items, he/she should also present the percent or frequency of people who selected each option (a nominal scale statistic) and let the reader decide how to interpret the results at the Likert-item level" (P.13). In the investigating of hotel environmental practices and similar studies, scholars applied these analysis and description *Likert type* data methods including percentage, frequencies and mean values (Bohdanowicz, 2005; Mensah, 2006; Elbana, Tag-Eldeen, Kattara, & Hamza, 2011; Zengeni, et al., 2013; Mensah, 2013; Mensah, 2014;)

3.2.6.2. Qualitative Data Analysis

The data collected through key informant interviews were analyzed and interpreted by qualitative descriptions. Some tables were also used to present the results of the study. These data were analyzed in thematic. The researcher took the following steps formulated by Braun and Clarke (2006). According to these authors, thematic analysis is often the fit method for qualitative research and consists of six stages. These stages are; familiarization with the data through repeat reading of transcribed interview data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing a report.

However, the researcher used the back and forth to compile the convenient report; because qualitative research analysis is not a linear process where the researchers simply move from one stage to the next stage Braun and Clarke (2006). These qualitative data were intended to supplement and triangulate the data analyzed quantitatively.

3.2.7. Validity and Reliability

Reliability and validity are the most essential features in the evaluation of any measurement instrument or tool for a good research Mohajan (2018). According to Altheide & Johnson, (1994) reliability is referred to the stability of findings, whereas validity is represented the truthfulness of research findings (as cited in Mohajan, 2018). Reliability refers to the possibility that any other independent researcher can replicate the study and generate the same findings (Yin, 2003).

This research considers the aforementioned factors and undertakes the work with great care. According to Brown (2011), the reliability of Likert scales should be checked using Cronbach alpha or another appropriate reliability estimate. Then the Cronbach alpha of sustainability practices Likert scale questionnaires were 0.836; for motivators of sustainability practices was 0.835 and for a barrier of environmental sustainability practices 0.862. Therefore, as Cronbach's alpha, more than 0.7 shows reliability; this research instrument shows strong internal consistency reliability. Hence during the analysis and interpretation the triangulation of data gathered by different instruments were insured. The data collection, analysis, procedures were briefly explained; which can support the validity and reliability of the data. In addition to that researcher strives to validate the work externally and apply recommendation and research results in the practical field of work.

3.2.8. Research Ethics

Creswell (2014) explained that the research code of ethics is the ethical rules and regulations developed by professional associations to guide scholarly research in the disciplines. According to Creswell, researchers should consider research ethics before the beginning of the study, during data collection, data analysis, data interpretations, and study finding reports.

Before starting the data collection, the researcher received a letter of support from the College of Developmental Studies, Addis Ababa University. The letter was written for research participants and contains a statement of the request for cooperation as well as it shows the researcher is legally permitted to research as a graduate student. In addition to that the questionnaire and interview guide have a cover letter which shows the intent of the research; confidentiality of their participation; guide how answer the questions, and contact address of the researcher. This cover letter briefly explained as the research participation is a voluntary basis. So, that the participants received this research participation invitation, they already aware of all the information and the purpose of the research.

During the data collection, the researcher approached, personally contacted the participants and distributed the required questionnaire and other required documents as per their participants' request. A necessary follow up was conducted until a satisfactory response was collected. During all processes, the researcher had respected the norms of the site, morale of participants and refrain from collecting unnecessary information. Data analysis was done based on balanced facts and in respecting the privacy of participants. Finally, during data interpretations and reporting the researcher did every decision based on only the collected facts. The data were stored and accessed only by researcher, advisor and another authorized personnel.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

Introduction

This chapter deals with the presentation, analysis and interpretation data to investigate the environmental sustainability practices; and environmental practices motivators and barriers in the hospitality industry. The data was presented sequentially under separated topics. Both quantitatively analyzed and qualitatively analyzed data were combined. Under each topic, the quantitative data description and analysis were presented preceding to qualitative data analyses. So the qualitative description and analysis were presented next to the quantitative in order to support and to explain in detail the findings. Therefore, the sub-subsequent section focuses on the analysis of the essential characteristics of the respondents' and hotels profile

4.1. Demographic Characteristics of the Respondents and Hotels

According to Susan (2012), the demographics are characteristics of the research population that are used in survey research which includes race, ethnicity, gender, age, education, profession, occupation, income level, and marital status. According to this author, while designing a survey, it is vital to assess whom to survey and how to breakdown overall survey response data into meaningful groups of respondents.

This subsection deals with the demographics of the research population, both the demographic characteristics of the respondents and hotels. The questionnaire respondents' backgrounds are including gender, age, education level, working experiences and position they hold. The hotels' profiles are grade category and type of ownership. The critical informant interview background data are the common name of the organization they selected from and the total number of the participants from each organization.

4.1.1. Demographic Characteristics of Questionnaire Respondents

In this research among the units of analysis, one is hotel managers. So, the background data characteristics of hotel managers are essential. Their detail descriptive statistics data analyses were presented in table 4:1.

Table 4: 1 Profiles Background of the Respondents

	Frequency	Percentage
Sex		
Male	100	81.3
Female	23	18.7
Age by category		
<20	1	.8
20-29	34	27.6
30-39	61	49.6
40-49	20	16.3
50-59	6	4.9
Above 59	1	.8
Education level		
High School Certificate	1	.8
Vocational /Diploma	9	7.3
Bachelors Degree	82	66.7
Post Graduate Degree	31	25.2
Position		
Other managerial positions	16	13.0
Food and beverage manager	6	4.9
Front office manager	13	10.6
Marketing/sales manager	22	17.9
Human resource manager	16	13.0
General manager	50	40.7
Experiences of respondents in hotel		
Less than three years	25	20.3
Three to five years	29	23.6
Six to ten years	51	41.5
Eleven to fifteen years	10	8.1
Above fifteen years	9	6.5

Sources: Own survey data (2019)

As has been seen from Table 4.1, the majority of the questionnaire survey respondents were males (81.3%). From this, it is possible to understand those male managers held the large percentages of managerial positions. It implies that the female's participation in the hotel industry's managerial positions is comparatively lowering than male participation. Nearly half of respondents' age was found between 30-39 years old (49.6%), followed by the respondents found between 20-29 years old (27.6%). It shows that younger managers are leading the hotel industry. Concerning the questionnaire responding to managers' educational background, the large percentage of respondents (66.7%) had a bachelor of degree. Moreover, interestingly a significant number of respondents (25.2%) were held postgraduates. So, nearly all Addis Ababa hotel managers are well equipped with sufficient education level.

From the total respondents, the position held by respondents were general manager (40.7%), marketing/sales manager (17.9%), human resource manager (13%), front office manager (10.6%), food and beverage manager (4.9%) and other managerial positions (13%) (i.e. chief engineering, manager on duty, training manager, housekeeping manager, supervisor, finance and administration manager, and operation manager). This implies that though the percentage distribution varies among various positions; almost the majority of the available top managerial positions are included in research respondents. These have an excellent contribution to receive data from the perspectives of all positions.

Concerning the experiences of research respondent managers, the large percentage of managers' (41.5%) time spent in working with the hospitality industry was that an experience that found in the range from six to ten years; followed by three to five years of working experience (23.6%). These data indicate that the majority of managers of hotels are at the senior level. The managers who worked in the hotel industry for more than ten years were only 15.4%. Though the majority of managers' experiences are found at the category of senior level, the managers working experiences in the hospitality sector may be mainly linked with the recent booming of the hotel industry in Addis Ababa. It is believed that, the majority of managers have joined the hotel sector with extensive experience from sectors other than the hotel industry. In addition to the manager respondents' background, the research participants' hotels' background profiles were analyzed as follows.

4.1.2. Profile Background of the Hotels

Another important character in this research is the hotels' background data. It includes the hotels' category by ownership type and their star grading level. Hotels ownership type indicates whether the hotels are owned and operated by local investors or owned by internationally chained companies. The detail descriptive statistics of these hotels' profiles were presented, described and analyzed as follows.

Table 4: 2 Descriptive Statistics of Hotels' Profile and Background data

	Frequency	Percentage
Status of Hotels Ownership		
Independent	117	95.1
Franchised	6	4.9
Category of hotels by grade		
Preferred hotels ¹	26	16
One star	13	10.2
Two star	28	22.8
Three star	33	26.8
Four star	20	16.3
Five star	9	7.3

Sources: Own survey data (2019)

The profiles of hotels in the study were analyzed based on the ownership and star grading level. According to the response of the hotel managers' the majority of hotels (95.1%) in the city are owned by independent private investors and only limited (4.9%) hotels are administered under internationally franchised/chained hotels. From the analysis, it is possible to understand that the participation of internationally franchised hotel investment in Ethiopia is remaining low compared to locally owned independent hotel investment. Further, Table 4:2 shows that preferred, star one, star two, star three and star four hotels constitute 16%, 10.2%, 22.8 %, 26.8%, 16.3%, and 7.3% share

¹ “Preferred” represents the category of hotels those ranked next/below to star one hotel: according to MoCT.

respectively. This shows that the majority of Addis Ababa hotels (76.4%) are graded below star four, and only 23.6% takes the share of star four and five.

4.1.3. Informant Respondents' Data

The background data of respondents of crucial informant interview includes the organization from they selected, age, educational background, their number and whether they are from a public or private company were described and presented in Table 4.3 accordingly.

Table 4: 3 Key Informant Respondents' Background

	Frequency	Percentage	Code for Participants
Sex			
Male	12	80	
Female	3	20	
Age by category			
<20			
20-29	1	6.7	
30-39	4	26.7	
40-49	6	40	
50-59	3	20	
Above 59	2	1.3	
Education level			
Bachelors Degree	6	40	
Post Graduate Degree	9	60	
Distribution by Organization			
Ministry of Culture and Tourism Office	3		Anonymous 1 Anonymous 2 Anonymous 3
Addis Ababa Culture and Tourism Office	2		Anonymous 4 Anonymous 5
Addis Ababa Sub cities Culture and Tourism office	5	73.3	Anonymous 6 Anonymous 7 Anonymous 8 Anonymous 9 Anonymous 10
Ethiopian Investment commission	1		Anonymous 11
Hotel Consultancy Companies	4	26.7	Anonymous 12 Anonymous 13 Anonymous 14 Anonymous 15
Total	15		

Sources: Own survey data (2019)

According to Table 4:3, the total numbers of key informant participants were fifteen. Except, the Hotel consultancy companies other organizations mentioned in the table were public organizations that are working with the hotel industry. In the figure, the majorities (66.7%) of critical informants were from the government organization, and the rest 33.3% of participants were the representatives of selected private hotel consulting companies found in Addis Ababa. Similar to hotel managers, the majority of key informants were male (80%). Still, the female participants are small compared to the male key informants from stakeholders. The majority of crucial informant ages (40%) were found between forty to forty-nine years old. The next major age group is found between thirty to thirty-three years old, which share about 27% of the total key informants. Concerning the educational background, the majority of key informants (60%) were already held a masters degree, and the rest is a bachelor of degree holders.

4.2. Environmental Sustainability Practices in Hotels

This part deals with the response of hotel managers' and hotel stakeholders on the operational environmental sustainability practices in their hotels. In order to analyses environmental practices, the researcher used various indicators divining under different categories.

The group of performance indicators included in the survey questionnaire was water efficiency, energy efficiency, waste management, clean air & green building, and buying green practices. The hotel managers were asked to indicate the extent of current environmental sustainability practices that their hotels were implementing. Managers rated the extent of their hotel's current environmental practice from their point of view depends on a choice provided for them with five point's Likert data. This five-point Likert data has the lowest value from 'never practice at all' to highest value 'very frequently practice'. In addition to the survey of questionnaire gathered from hotel managers, qualitative data was gathered from selected hotel standards with a semi-structured interview. Therefore, the quantitative data was presented, described and analysed accordingly mixed with qualitative data.

4.2.1. Energy Saving Practices in Addis Ababa Hotel Industry

Energy is one of an essential resource for hotel operation. Energy is used for various purposes in the hotel such as heating rooms, cooling rooms, lighting, hot water use and other energy-consuming activities by guests, cooking, swimming pool and others. So that it is easily possible to guess that hotel premise can consume high energy level. If not well managed, the consumption energy can costs the hotel a lot and can harm the local environment negatively. Therefore, Hotels need to be energy efficient during their whole operation. The researcher used six leading indicators (variables) under the group of energy-saving practice. This sub-section presented and analyzed energy efficiency practices' indicators in Addis Ababa hotels

Table 4: 4 Quantitative Description of Energy Saving Practices Indicators

Indicators		Never	Very rarely	Rarely	Frequently	Very Freq.	Mean
Uses energy-efficient electric bulbs	Freq.	-	20	11	62	30	3.83
	Percent	-	16.3	8.9	50.4	24.4	
Uses Key cards/sensor to turn power on and off	Freq.	6	24	4	52	37	3.73
	Percent	4.9	19.5	3.3	42.3	30.1	
Installs energy-efficient appliances in hotel	Freq.	1	28	10	61	23	3.6
	Percent	0.8	22.8	8.1	49.6	18.7	
Cleans and repairs all electric facilities	Freq.	-	6	16	77	24	3.9
	Percent	-	4.9	13	62.1	19.5	
Uses alternative renewable energy source	Freq.	70	41	7	2	3	1.5
	Percent	56.9	33.3	5.7	1.6	2.4	
Uses central water heating system	Freq.	56	28	5	15	19	2.2
	Percent	45.5	22.8	4.1	12.2	15.4	

Source: Own survey data (April, 2019)

Note: The mean and standard deviation were computed based on numerical values assigned to the responses: Never=1; Very rarely=2; Rarely=3; Frequently=4; and Very Frequently=5

Table 4:4 reveals the responses of hotels on their current energy-saving practices. According to this table among the surveyed energy-saving practice indicators, the regular maintenance of electric facilities; uses of energy-efficient electric bulbs; installation of key card/sensor to turn on and off light and the installation of energy-efficient appliances were the most widely implemented initiatives by scoring the mean values of 3.97, 3.83, 3.73, and 3.63 respectively in Addis Ababa hotels. While the installation of the central water boiling system was moderately practiced with a mean score of 2.29, the uses of alternative sources of energy program were poorly performed with a mean score of 1.59 in the Addis Ababa hotels. The highest mean score is ranked as the most commonly practiced sustainability indicators.

Based on the average mean values of the above energy-saving practices, the activity of cleaning and repairing electric facility is ranked first. Many hotels (19.5%) responded that they clean and repaired their electric facilities very regularly, and the majority of hotels (62.1%) practice it frequently. Contrarily to these, 13% and 4.9% of hotels practice cleaning and repairing of electric facilities rarely and very rarely respectively. This positive percentage response shows hotels are good at repairing their electric facilities; which a play key role in saving energy.

Following the cleaning and repairing of the electric facilities, the most implemented energy-saving measurement is the practice of using the energy-efficient bulb in hotel premises. About 30 (24.4%) hotels use high energy efficient bulbs very frequently, and 62(50.4%) hotels used it frequently. Among the surveyed hotels, more than one-fourth hotels (25.2%) do not use energy-efficient bulbs. This indicated that these hotels are using traditional incandescent bulbs or other non-energy saving type bulbs.

The third most performed energy-saving initiative was an installation of energy-efficient appliances in hotels. More than eighteen per cent of hotels (18.7%) used energy-efficient appliances very frequently, and nearly half of the surveyed hotels, 61(49.6%) used it frequently. The significant percentage of hotels (31.8%) responded that their electrical appliances are not such energy saving. This overall response summary shows that hotels are better at using energy-efficient bulbs and electric equipment in their operation. The responses in qualitative data also supported the installations of modern electric technology practices reflected above. Currently, the Addis Ababa hotels are moderately good at working to install energy-efficient bulbs and

appliances. As the awareness towards energy-saving advantage become popular, hotels are started rapidly delving themselves in energy-saving practices. Hotels are striving to minimize their energy consumption through installing and energy-saving innovations or energy using reduction process. These days, modern technology itself becomes playing a significant role in saving energy. In his speech, a key informant interviewee Anonymous 13 (personal communication, May 20, 2019), said:

I know the practice of energy-saving commonly in internationally franchised hotels. Besides, they use different pieces of equipment and feature to save energy. For example, to save energy in guest rooms, on stair and corridors, they use key cards and automatic sensor light. Also, such kinds of energy-saving practices are now becoming common in local independent hotels- especially in the newly built hotels.

Another key informant explained the energy efficiency characteristics of today's new technologies like "Nowadays there is an awareness of energy-saving everywhere in the hotel sector. Even the bulbs themselves are good at energy saving. They use less energy consumable bulbs. They import better energy-saving equipment like stove, ovens, boilers and other machinery as they get support from professionals in the form of advice" (Anonymous 12, personal communication, May 20, 2019).

A key informant stakeholder in this study explained energy efficiency in a hotel as;

I can say our hotels are moderately good at energy-saving practices. Some hotels use the central boiling system. More than that, hotels with higher star grades use sophisticated and automatic electric appliances; these appliances regulate energy for themselves. Many hotels use key cards, and few use motion sensor bulbs to save energy from light. Others effectively use energy-efficient central water heating system (Anonymous 4, personal communication, May 13, 2019).

The implementation of using alternative sources of power and implementation of a central water heating system received very low and low scores, respectively, compared to other variables. Among the total number of participated hotels, only 19(15.4%) and 15 (12.2%) hotels were already installed the central boiling system very frequently and frequently, respectively. This shows that the rest hotels are using one unit of the heating system per room. Concerning the

practices of alternative sources of the energy program, only minimal hotels (2.4%) indicated that they were used a renewable energy system. A few numbers of hotels (1.6%) responded that they were using alternative sources other than electric power like solar system frequently. Also, stakeholders confirmed that except very few, Addis Ababa hotels do not have the alternative renewable energy program. The using of alternative sources of renewable energy program is not accustomed as a country in Ethiopia. This can attach to various factors the level moderation and economic development. One key informant narrated the absence of alternative energy programs as follows:

I know not more than two or three hotels using alternative sources of energy, the solar system for their operation. Whereas, to overcome the problem of electricity interruption that commonly occurs in Addis Ababa due to the shortage of electric power, hotels use generators. Otherwise, except few, I have not seen any alternative sources of power used in Addis Ababa hotel businesses yet (Anonymous 6, personal communication, May 16, 2019).

On the other hands, to overcome the electric power shortage, every hotel in Addis Ababa owns a diesel generator. The study reveals that Ethiopia Ministry of Culture and Tourism and Ethiopian investment Commission allows the hotel business to import free duty diesel generator. The duty-free importing diesel generator is mainly allowed for investors to motivate the hotel sector's business and to help hotels continue their operation during the electric power interruption. Using non-renewable energy like diesel generator is the common practices across the whole hotels in Addis Ababa. Some quote received during key informant interviews are written here; A key informant said that; "The diesel generator is universal throughout the hotels. There is a standby diesel generator everywhere (in hotels). Everyone can see the diesel generator at the ground part/back of all hotel buildings, or one can hear the voices of generators' during an electric power interruption" (Anonymous 9, personal communication, May 17, 2019).

These imply that, except very few, nearly all hotels are relying on hydroelectric power and other non-renewable power for their internal operation. The above data analyses show that the energy-saving practices within Addis Ababa hotels seem moderately good.

4.2.2. Water Saving Practices

Water is also another essential resource for hotel operations. To use wisely and to be environmentally friendly, hotels have to save water accordingly. In order to assess the hotels environmentally friendly practice, in terms of water-saving, the researcher used seven leading indicators (variables). This part presents the description and analysis of the data on water efficiency practices' indicators in Addis Ababa hotels.

Table 4: 5 Quantitative Description of Water Saving Practices' Indicators

Indicators		Never	Very rarely	Rarely	Frequently	Very Freq.	Mean
Installs low-flow water technologies	Freq.	-	11	27	58	27	3.82
	Percent	-	8.9	22.0	47.2	22.0	
Uses low-flush or dual-flush toilets	Freq.	1	11	9	72	30	3.98
	Percent	.8	8.9	7.3	58.5	24.4	
Encourages guests to re-use a bed linen and towels	Freq.	67	29	16	3	8	1.83
	Percent	54.5	23.6	13	2.4	6.5	
Uses water efficient laundry machine	Freq.	1	12	23	63	24	3.79
	Percent	0.8	9.8	18.7	51.2	19.5	
Recycles and re-uses water	Freq.	37	62	16	8	-	1.96
	Percent	30.1	50.4	13	6.5	-	
Implements rainwater harvesting techniques	Freq.	38	75	9	-	1	1.79
	Percent	30.9	61	7.3	--	0.8	
Maintains water equipment to prevent water leaking	Freq.	-	7	28	49	39	3.97
	Percent	-	5.7	22.8	39.8	31.7	

Source: Own survey data (April, 2019)

Note: The mean and standard deviation were computed based on numerical values assigned to the responses: Never=1; Very rarely=2; Rarely=3; Frequently=4; and Very Frequently=5

The table 4:5 shows, among the identified indicators of water-saving practices, the installation of low flow or dual flush toilet ranked first with the highest score mean of 3.98. The timely maintenance of water equipment with a mean score of 3.97; installation of low flow water technologies mean score of 3.82; and the employing of water-efficient laundry machine (with a mean score of 3.79) ranked second, third and fourth next to the installation of the low flow toilet flush.

The implementation of installing low flush/dual flush toilet is practised very frequently in 30(24.4%) hotels and frequently in 72 (58.5%) hotels with a mean score of 3.98. Less than one-fifth per cent (17%) of hotels respond that their toilet is not characterized by water saving. This analysis indicates that water saving in the toilet is well-practised in a hotel. The second-ranked widely practised water-saving initiatives were the maintenances of water equipment to prevent water leaking. The cleaning and maintenances of water equipment like showerheads, pipes, hand wash tap, kitchen taps, toilet flush, laundry machine, water boilers, swimming pool and garden sprinklers in order to avoid water leakage that cause the misuse of a large amount of water.

About 31.7% and 39.8 % of hotels practice maintenances of water equipment very frequently and frequently, respectively. It reveals that water equipment maintenance is only moderately practised in hotels. Thirdly, about 27 (22%) and 58(47.2%) hotels use a low flow or water-efficient equipment such as hand wash taps, showerheads and kitchen taps very frequently and frequently respectively. From the complete survey, nearly one-third hotel (30.9%) responded that their water flow technologies are not water efficient. Still, this data analysis implies that water-efficient equipment installation practices are moderately practiced in hotels. The water-saving equipment can be water sensor faucet or water regulator that helps for constant and maximum water flow per minutes. More than half of hotels (51.2%) already employed water-efficient laundry machine. Nearly twenty per cent (19.5%) were employed water-efficient laundry machine very frequently in the hotel. At the same time, less than one-third of hotels' (29.3%) laundry machine is not water efficient. This shows as though hotels moderately practice the using of water-saving laundry machine; still, a significant number of hotels ignored it. The role of the laundry machine in water-saving is enormous.

The stakeholders' explanations also supported these analyses of water-saving facilities. Whether hoteliers are pay attention to water-saving practices or not, the technology purchased in order to furnish hotel itself has a contribution to water saving. One key informant explained it as follows:

Even though it is common in internationally franchised hotels, a significant number of local independent hotels are currently using water-efficient technologies. For example, the installations of low flow technologies like hand taps, kitchen faucets, toilet flush and urine toilet are become common, especially in newly built hotels. Using of such

equipment are; firstly hotels are forced to use modernized technologies to be competent enough with other similar modern hotels; the other reason they calculate about the cost they save from wise using of water (Anonymous 12, personal communication, May 20, 2019).

The implementation of the rainwater harvest technique, the re-use of bed linen & towels program, and the recycling and the re-using of water are the least performed water-saving practices with a low average of 1.79, 1.83 and 1.96 respectively. Furthermore, though their number is limited, there are few Addis Ababa hotels committed to environmental sustainability through water saving. One key informant narrated that:

Certain hotels do have the linen and towels re-use program in order to save water effectively. These hotels put green cards with notes in their rooms to demand their guests to remind the re-use of bed linen and towels. So, they do not have to change their bedsheets every day that enables them to save water. That is one of the points where they can save water and then energy (Anonymous 14, personal communication, May 22, 2019).

Another key informant explained the absence of rainwater harvesting system and the challenges brought it as follows;

Most of the time water saving and the using alternative sources of water is affected by the design of hotel buildings and land acquisition. As most independent hotels were built on small land with poor design, it is challenging for them to have their alternative sources of water. For example, the installation of a rainwater harvesting system and the drilling of underground water were determined by the availability of readymade hotel design and sufficient land. As a result, the majority of Addis Ababa hotels lack rainwater harvesting system and underground water (Anonymous 1, personal communication, May 10, 2019).

Addis Ababa lacks sufficient water supply. Despite the shortage of water supply in Addis Ababa City Administration, the majority of hotels depended on the water that comes from the municipality pipeline for their operation. For these and other reasons, water is costly in the city. By this time, the shortage and expensiveness of water, forces hotels to save or to use the

available water efficiently. To reduce the level of water shortage, currently, the government is directing hotels to drill the groundwater and use for their consumption.

Furthermore, an internationally franchised hotel and few locally owned hotels save water pushed by their internal environmental policy, but the majority of locally owned hotels are saving water due to the contributions of other factors rather environmental commitment. The applications of modern technologies are contributing to saving water Addis Ababa hotels. That means, whether hoteliers paid attention for water-saving or not, the technology they purchased in order to furnish hotel has a contribution to water saving. To solve these problems, currently, the government is imposing hoteliers to drill their water well. Moreover, even these days some hotels are depending on the groundwater. Stakeholder informants narrated the condition of water usage, source of water, water shortage and the motivation behind using water efficiently in Addis Ababa hotels as follows:

Few hotels have water well in their compound. They use it for the garden, swimming pools and other purposes. In Addis Ababa, water supply is challenging for hotels; even now, as we speak, many hotels are buying water because the available water supply is not enough for hotels operation. They spent a lot to buy water. That is why they are forced to drill water from the ground. So mainly, money-saving motivate them to have their source of water rather than committed for environmental sustainability issues (Anonymous 5, personal communication, May 13, 2019).

Another key informant explained the condition of water usage in hotel and shortage of water supply for hotels as:

Water supply is minimal in Addis Ababa. So water is saved for economic values in plenty of hotels, it is also practiced in limited independent hotels those initiated to saves water for its environmental values. To overcome the shortage of water, the government already puts the direction for hotels to have their own groundwater sources in order to satisfy their water consumption rather than waiting sufficient water supply from Addis Ababa City Administration Municipality. However, as groundwater needs huge investment, only limed hotels are owned by now (Anonymous 15, personal communication, May 22, 2019).

The above water efficiency indicators description implies that in terms of using water saving fixture technologies, Addis Ababa hotels are found at functional performance status. The installation of modern water appliances and fixtures technology; and shortage of water supply were the main initiator of water saving practices in the Addis Ababa hotels. However, hotels are currently poorly practicing the re-use of water and no wastewater treatment practices at all. Nevertheless, insignificant numbers of hotels are re-using water for swimming pools. In addition to that, it revealed the presence of weak performances in terms of re-using and sustainable sources of water. More than that, despite the acute water shortage in the city, one cannot see any hotel installed the rainwater harvesting system that can be an alternative source of water at least for cleaning and gardening purpose.

4.2.3. Waste Management Practices in Addis Ababa Hotels

Hotels Contribute to substantial waste generation. This section presents the description and analysis of waste management initiative indicators' performances in Addis Ababa hotels. To analysis the waste management practices in Addis Ababa hotel industry, the researcher utilized about eight indicators which are presented as follows.

Table 4: 6 Quantitative Descriptions of Waste Management Practice indicators

Indicators		Never	Very rarely	Rarely	Frequently	Very Freq.	Mean
Reduces paper use by replacing electronic formats	Freq.	25	49	20	17	12	2.53
	Percent	20.3	39.8	16.3	13.8	9.8	
Using refillable soap, and shampoo dispensers	Freq.	9	34	17	47	16	3.22
	Percent	7.3	27.6	13.8	38.2	13.0	
Donates or sales unwanted furniture, linens, and other materials to reduce waste	Freq.	4	16	19	64	20	3.65
	Percent	3.3	13.0	15.4	52.0	16.3	
Places recycle/dust bins to encourage recycling	Freq.	2	3	9	72	37	4.13
	Percent	1.6	2.4	7.3	58.5	30.1	
Sorts the wastes separately	Freq.	1	17	8	58	39	3.95
	Percent	.8	13.8	6.5	47.2	31.7	
Re-uses materials to reduce waste	Freq.	35	80	5	3	-	1.8
	Percent	28.5	65	4.1	2.4	-	
Disposes wastes eco-friendly	Freq.	8	5	8	83	19	3.81
	Percent	6.5	4.1	6.5	67.5	15.4	
Treats waste-water	Freq.	33	77	7	4	2	1.9
	Percent	26.8	62.6	5.7	3.3	1.6	

Source: Own survey data (April, 2019)

Note: The mean and standard deviation were computed based on numerical values assigned to the responses as: Never=1; Very rarely=2; Rarely=3; Frequently=4; and Very Frequently=5

As has seen on table 4:6, among the indicators used to measure the waste management practices in Addis Ababa hotel, the most commonly implemented practices was the activity of placing dust/recycle bin in all hotel property with a highest mean score of 4.13. Accordingly, thirty per cent of hotels (30.1%) places dust/recycle bin very frequently across the hotel premises. At the same, fifty-eight percent of hotels (58.5%) were placed dust bin in hotel premises frequently. About 11.3% of hotels were not properly placed the dust bin across their hotel properties. This implies that hotels are practicing the dustbin placing well in their premises. Next to the implementation of dust bin placing initiatives, the most commonly practiced waste management activity was sorting the wastes separately with a higher mean score of 3.95. It was implemented very frequently in 39 (31.7%) hotels and frequently in 58 (47.2%) hotels.

More than six per cent (6.5%) hotels were sorting wastes rarely, and 13.8% of hotels were almost not performed sort activities. This is also considered as a good achievement in waste management practices. The data emanated from key informants supported these two results. On dust bin placing and sorting of wastes, an informant affirmed: “As far as I know, recycle/dust bin is commonly available in hotels. Besides that, almost all hotels sort the solid wastes”. One key informant stated that: “Always we visit all new hotels on the eve of their operation. To begin the service delivery hotels have shown their solid waste sorting system to our experts. If they cannot fulfil even one element, they are not allowed to operate”. The third-ranked environmental practices in waste management were disposing of the waste eco- friendly; with the mean score of 3.81. Waste disposal practices were appropriately implemented in 19 (15.4%) hotels and somewhat properly in 83(67.5%) hotels. However, it possible to presume from table 4:6, that the rest hotels (17.3%) was not performing the activity of waste disposal eco-friendly. This percentage achievement shows it fairly good proper waste disposal practices in hotels. One key informant stated is as: “In order to dispose of the sorted wastes, hotels have a contract agreement either with the municipality or other private companies working that. However, the challenging solid wastes are note removed from hotels timely”.

Other practices of waste reduction like donating or selling off unwanted property (mean of 3.65); and using refillable dispensers (mean of 3.22) were performed more than average. The managers responded that the donation or selling of unwanted furniture, linens or other materials to reduce waste were very frequently practiced in 20 (16.3%) hotels and frequently practiced in 64 (52 %) hotels. The rest of the hotels (31.7%) were either not practice or poorly practiced the waste reduction through donating or selling unwanted properties. This result shows that donating or selling off unwanted property practices is reasonably good, but it is still below expected while comparing the Ethiopian culture of donation and sharing property. The study shows that these hotels sell or donates reusable materials accordingly.

According to an explanation of one key informant, “Some of Addis Ababa hotels participate in donating materials for people who comes with support letter-brings from the concerned body”. Refillable soap, lotion and shampoo dispensers were performed very frequently and frequently in 13% and 38.2% hotels respectively. Nearly half of the surveyed hotels (48.7%) were not

practiced the installation of refillable dispensers. These hotels are utilizing the ‘use and through’ containers, which raise the quantity of wastes in hotels. So on this practice, Addis Ababa hotel is performing averagely.

The reduction of paper use (mean=2.53) or replacement of electronic format to reduce paper waste is practiced effectively in 12(9.6%) hotels and moderate effectively in 17 (13.8%) hotels. Majority of the Addis Ababa hotel managers (76.4%) responded that the paper waste reduction measurement was not adequately implemented in their hotels. This implies that still, Addis Ababa hotels are highly depending on papers for internal office works as well as for different promotional activities. Other waste management activities like recycling, decomposing of eco-friendly wastes, and wastewater treatment are not practicing at all. The absence of garden is counted as the main reason for not composting the eco-friendly wastes. For the absences of activities like recycling materials in hotels, can be happened that the machines and plants required for both recycling program and wastewater treatment costs a lot, that is why the hotel owners cannot afford or not interested in invest on it.

The treatment of wastewater with a mean of 1.9 was the poorly implemented environmental practices across the Addis Ababa hotels. According to this data, there is no liquid waste treatment practicing in Addis Ababa hotels. The liquid wastes generated from hotels are still seriously affecting the local environment. This is because hotels use various strong chemicals for cleaning the kitchen, guest rooms, toilet, shower room, public areas and as well as different types of soap for washing clothes in the laundry, it is understandable that the liquid wastes generated in hotels are very hazardous for the local environment. However, Addis Ababa hotels are not practicing wastewater treatment; instead, they release it to the municipality sewerage system or discharge it using vacuum trunks-the unsafe sewerage disposal way. Examples of quoted informants’ responses are written below.

One key informant interviewee mention in his speech as “.....in Addis Ababa, I have not experienced any hotel practicing liquid waste treatment these days, whereas I have seen a couple of hotels like Haile Resort and Rori Hotel at Hawassa. They treat liquid wastes as well they used it to generate energy from biogases”. Concerning waste water treatment, one key informant interviewee narrated;

As far as I know, by this time no hotel is treating wastewater. Majority of independent hotels are not treating liquid wastes. In Addis Ababa, to discharge their liquid wastes hotels simply link their lines with the city municipal liquid waste drainage system in the way not pollute the local environment. When I am saying “the way not pollute the environment” only I am referring to the pollution that we can see by our naked eye as a layman without supported by any study or environmentalists know-how. However, I know that international franchised hotels operated in Addis Ababa make treatment before discharging their water waste based on their policy (Anonymous 12, personal communication, May 20, 2019).

In addition to that, concerning the liquid waste management; another key informant interviewee Anonymous 6 (personal communication, May 16, 2019), in his speech explained that:

Currently, there are two types of liquid waste disposal methods are practicing among Addis Ababa hotels. The first, in the central part of Addis, there is a central municipal way of discharge waste where hotels simply connect the system and discharge the liquid waste to the line. In this case, hotels pay bill per month for the municipality. For this system, hotels do not need to use a septic tank. The second, those hotels who do not have access to the central municipality sewerage system, store the liquid waste in the septic tank. In this case, the Addis Ababa City Administration collects it by vacuum trunk and disposes of it somewhere. Alternatively, some private companies discharge the waste from a septic tank.

These data shows Addis Ababa hotels were performing particular solid waste management such as activities like placing recycle bin, donating/selling materials, disposing of wastes and sorting wastes moderately good. Besides these, even though there is encouraging starting waste management practices, certain fundamental waste reduction practices like re-using materials are still not accustomed well.

4.2.4. Clean Air and Green Building

Hotels can contribute to keeping the environment air clean by taking care of their operation. This section presents the description and analysis of clean air and green building initiative indicators performances in Addis Ababa hotels. Three major clean air and green building design indicators were used under this subsection.

Table 4: 7 Quantitative Descriptions of Indicators in Initiatives for Clean air and Building

Indicators	Level of practice	Frequency	Percent	Mean
Implements smoke-free policy throughout the hotel property	Never	5	4.1	3.89
	Very rarely	18	14.6	
	Rarely	7	5.7	
	Frequently	49	39.8	
	Very frequently	44	35.8	
	Total	123	100.0	
Planting trees in garden for clean air and aesthetic values	Never	22	17.9	2.41
	Very rarely	60	48.8	
	Rarely	17	13.8	
	Frequently	16	13.0	
	Very frequently	8	6.5	
	Total	123	100.0	
Works on eco-friendliness of buildings (during design)	Never	15	12.2	2.3
	Very rarely	73	59.3	
	Rarely	22	17.9	
	Frequently	9	7.3	
	Very frequently	4	3.3	
	Total	123	100.0	

Source: Own survey data (April, 2009)

Note: The mean and standard deviation were computed based on numerical values assigned to the responses as: Never=1; Very rarely=2; Rarely=3; Frequently=4; and Very Frequently=5

As it is seen from the Own survey data descriptive summary presented in table 4:7, one of the prevailing environmental sustainability practices in the hotel industry is an initiative to create clean air in the local environment. To assess these practices in Addis Ababa hotels, the

researcher assessed three commonly known practices; having a smoke free policy, green building and planting trees in or surrounding to the hotel premises. As it can be viewed from the above table, 76.6% of Addis Ababa hotel managers said they were implemented smoke-free policy throughout the hotel property, with significant score mean 3.89. Though there are smoke-free policies or separated room for smoking throughout the Addis Ababa hotels, the main initiative not intended for environmental management. Mainly it is intended to attract non-smoker customers. If hotels are motivated to create clean air; they would not use non-renewable energy sources like fuel consuming generators. A key informant explained the issue as follows:

Now, most of our hotels have a smoke free policy. Notably, the locally owned independent hotels are striving to fulfill Ethiopian Star Grade Awarding Manual criterions like having separated smoking room, which not considered as environmentally committed practices (Anonymous 7, personal communication, May 16, 2019).

Comparative to a smoke-free policy, only a few hotels (18.5%) has been planting trees to have clean air. The majority of hotels responded that they had not implemented planting trees initiative. This indicates that the majority of hotels do not have a garden or not participate in tree planning somewhere in the city at all. A key informant in this study stated it as “concerning the greening most of our hotels lack lands for that; there is a lack of space. They are trying to use the available space like a balcony, in restaurant and bar areas to put small plants” (Anonymous 14, personal communication, May 22, 2019).

One stakeholder key informant narrated the situation in detail as follows:

You can see hotels with a garden out of Addis Ababa, to some extent. Nevertheless, in Addis Ababa, except very few hotels garden is uncommon. Even there is a considerable challenge for parking space as the city is overcrowded and there is a shortage of land. For example, take hotels like Radisson blue, Intercontinental, Jupiter and Ililly international, even there is no safe walkway due to overcrowded parking on small space. Old hotels like Sheraton, Ghion and Hilton have a garden. Even if the owners have some land, they use it to build something as no one pays value for the garden (Anonymous 2, personal communication, May 10, 2019).

Table 4:7 shows that Addis Ababa hotels are poorly worked on their building to make green or majority hotel buildings not designed environmentally friendly. Only ten percent (10.6%) hotel managers responded that their hotel was designed to make their hotel to be an environmentally friendly way. However, nearly 90% of research participant hotel managers responded that their hotel buildings were not considered the issues of environmental friendliness during design. It is possible to view that the majority of hotels was built near the main roads without proper design, site selection and free places from the garden, which is very inconvenient for gardening work. By its nature, the hotels located in the city centre are affected by smokes produced from other sources in the city than that produced on the premises of the hotel.

It is possible to say the hotel environmental sustainability extent is hidden behind the building's design. Good hotel design has a contribution to saving of water, saving of energy, waste management, visual appearance, and creation of cleaning the air in one or another way. The Addis Ababa hotels buildings design were affected by environmental practices like savings of water, saving of energy, waste management, visual appearance, and creation of cleaning the air in one or another way. For the majority of hotels, even the location of hotel buildings and environmental impact assessment (EIA) were not considered during the design stage. It has been assured that due to the lack of awareness and lack of focus from hotel business owners and from government bodies Addis Ababa hotel buildings were not design environmentally friendly. One narration of key informant in this stay is quoted as follows;

The sustainability of hotels can be explained based on their type- the independent hotels and the second once are internationally franchised hotels. As you know, hotel sustainability issues begin at the stages of site selection where to build the hotel and at stages of building design. With independent hotels, I can say more than ninety percent of hotels do not consider environmental sustainability during the building design, construction and even in the operational stages; they do not consider it. When it comes to the international hotel chains, you know that international hotels do have standards. They enforce their brand standard from the very design stage. Therefore, I would say during design, construction, even in the operation stage hotel chains consider their operation to be environmentally sustainable, and they are more environmentally friendly. The major problem environmental sustainability is related to the first type of hotels. So these are the general situations that we have in Ethiopia (Anonymous 6, personal communication, May 16, 2019).

On the issue of the problem with hotel building design, another informant said “Hotel owners do not have enough idea on this. I face a problem with this during I advises. In my assumption, I can say, among Addis Ababa hotels about 80% are not considering the design for environmental sustainability at all” (Anonymous 12, personal communication, May 20, 2019).

As it is seen in the above description of hotel managers’ response, the hotel industry performances on creating clean air are not satisfactory as such. The next part deals with green purchase initiatives within hotels.

4.2.5. Green Purchase Practices

The green buying is commonly known environmental practice’ in the hotel industry. This subpart deals with the description and analysis of green buying indicators’ performances of Addis Ababa hotels.

Table 4: 8 Indicators to Measure Performances of Green Purchase Practices

Indicators and its performances		Frequency	Percent	Mean
Purchases eco-friendly products and materials	Very rarely	3	2.4	3.93
	Rarely	22	17.9	
	Frequently	79	64.2	
	Very frequently	19	15.4	
	Total	123	100.0	
Purchases local products/ materials	Rarely	8	6.5	4.32
	Frequently	68	55.3	
	Very frequently	47	38.2	
	Total	123	100.0	
Avoid excess package purchase	Never	7	5.7	3.66
	Very rarely	8	6.5	
	Rarely	30	24.4	
	Frequently	53	43.1	
	Very frequently	25	20.3	
	Total	123	100.0	

Source: Own survey data (April, 2019)

Note: The mean and standard deviation were computed based on numerical values assigned to the responses as: *Never=1; Very rarely=2; Rarely=3; Frequently=4; and Very Frequently=5*

Table 4:8 reveals that among indicators listed to measure green purchasing initiatives of Addis Ababa hotels, buying the local product was the most frequently practiced compared to the rest indicators with the highest mean score of 4.32. Purchasing eco-friendly material and avoiding the purchase of excess package ranked the second and the third with a mean score of 3.93 and 3.66 respectively.

Majority of hotels (38.2%) purchase local products very frequently and 55.3% of hotels buy frequently. Whereas, very few hotels (6.5%) responded that they did not adequately implement green purchase in terms of buying local products and materials for hotel services, production and operation. Local purchasing plays a role in reducing the carbon dioxide produced for long transporting supply; it is considered as the most sustainable form of buying. According to this data, Addis Ababa hotels have outstandingly performed the purchasing of local products. According to the stakeholders' responses, for the majority of food and drink-related supplies required in hotels for services and production, almost all hotels depend on the local market source. This is influenced by the availability of fresh food and drinks products in the local market. Only limited hotels import some food and drink products that cannot be afforded in the local market. Contrarily to the food and drink products, the majority of appliances, types of equipment, furniture and other hotel furnishing products were mainly imported from abroad. The local economy production capacity mainly influences this.

During field interview, one key informant explained about food-related hotel supplies from the local market as:

The raw material for food services, including fruits and vegetables, are supplied from local farms. However, some hotels like Skylight, Hilton, Sheraton and other few international hotels imports some supplies like fruits and fish products, which they cannot get from local sources. But, I would say most of the vegetables and fruits purchased from local sources. This can be influenced by customers demand for fresh products. For example, for skylight, Ethiopian Airlines is one of the biggest buyers of fruits and vegetables from the local market through the direct market with the farmers (Anonymous 12, personal communication, May 20, 2019).

Another key informant, Anonymous 11 (personal communication, May 17, 2019) added that “On purchasing local products, our hotels seem good; they purchase from overseas if they face shortage only of supplies they require for their operation”.

The second buying green initiative is purchasing eco-friendly products and materials. About 79.6% of hotels agreed that they were mainly purchasing eco-products. The rest twenty percent (20.3%) of hotels responded that mainly they did not merely depend on eco-friendly products for their operation. This implies that hotels perform purchasing eco-friendly products and materials initiative at a level that can be recognized at good. One key informant described the buying of hotels on eco-friendly appliances and equipment as:

Using eco-friendly- equipment, materials and appliance are normal in Addis Ababa based internationally franchised hotels due to their policy. In local independent hotels, even though they do not have such firm policy, except few, this day the law of countries does not allow importing extremely environmentally unfriendly materials. I believe that Ethiopian Quality Standard Agency and Ethiopian Custom Authority look after and control it this during their import (Anonymous 15, personal communication, May 22, 2019).

However, the buying of eco-friendly materials faces particular critiques. Though there is certain vagueness, the eco-friendliness of imported hotel equipment and appliances’ are being checked by government authorities at entry points. The most critiques are the difficulty of identifying whether products are eco-friendly or not. Especially products related to various chemicals purchased for cleaning purposes. Even though the hotels’ responses were positive, it is tough to be sure if most hotels are using eco-friendly products. Because, some locally produced consumable products such as cleaning chemicals may be labeled as eco- friendly, but it is challenging to be sure whether the products are eco-friendly or not. Even, no one is sure if fresh fruits and vegetables are free of inorganic fertilizers. Other consumable materials, equipment and appliances that imported from internationally certified companies’ negative impacts are relatively minimal on local environments. Certain plastic products are also mostly viewed in hotels publically.

About two-thirds of surveyed hotels (63.4%) agreed that they were not accustomed to purchasing any excess products. However, about 30.9% of the hotel responded that they were buying excess packages for their service operation to save in stock. This is also cognized as fairly good performances of environmental initiative. There is also a short explanation of a few key informants are included to support the analysis of fair amount purchase provided here. A key informant from government office narrated about the purchase of hotels as;

As I see during the supervision, the majority of hotels do not store excess packages in their store. I can say that only a few hotels have a moderately large stock of materials in their storage. These hotels are those who have long period purchasing system such as purchasing system once in six months or once in three months for equipment and non-consumable materials (Anonymous 3, personal communication, May 10, 2019).

The above presentation and description results show that the majority of hotels are currently well-performing most of the practices that were listed in the questionnaire. Especially the buying of local products for food and drinks are looks scoring good performances.

There are some encouraging factors to environmental sustainability management implementations within Addis Ababa hotels. These principal relevant, motivating factors analysis and descriptions and analyses presented in the following section.

4.3. Motivations for Environmental Sustainability Practices in Hotels

This part discovers factors motivate hotels to implement environmental practices. The hotel's environmental practices motivations were measured by asking the Addis Ababa hotel managers to mark their degree of agreement with the provided statements on a five-point Likert scale. Based on the responses of hotel managers, these driving factors for environmental practices implementations in the hotel industry were described in the following subsequent parts. Table 4:9 displays the quantitative description of hotel environmental practices motivating factors.

Table 4: 9 Descriptive Statistics of Environmental Sustainability Practices Motivators

Items	N	Rank	Mean
Potential Cost Saving	123	1	4.42
Attract Customers	123	2	4.07
Improve Quality of Service	123	3	4.06
Achieve Award and Recognition	123	4	3.94
Improve Image of the Hotel	123	5	3.93
Technologies Influences	123	6	3.71
Improve Relationship with Local Community	123	7	2.60
Environmental Protection/Conservation	123	8	2.55
Government Incentives	123	9	2.42
Pressure from Stakeholder	123	10	2.23
Valid N (listwise)	123		

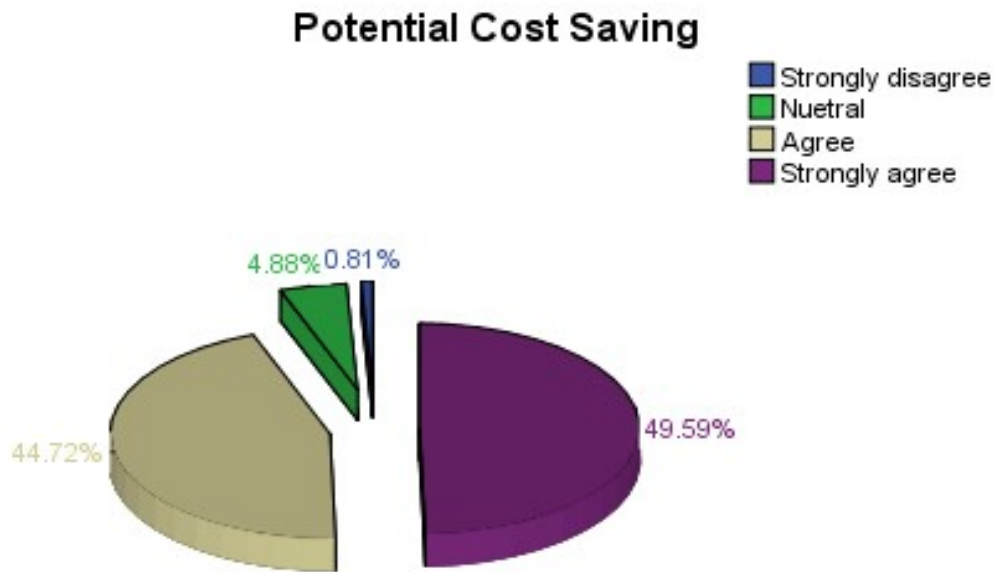
Source: Own survey data (April-May, 2019)

Note: The mean and standard deviation were computed based on numerical values assigned to the responses as: Strongly disagree=1; Disagree =2; Neutral=3; Agree=4; Strongly Agree=5

From Table 4:9, it is possible to view that cost saving was the main motive for environmental actions in Addis Ababa hotels with high score mean of 4.42. Following the cost-saving factor, attracting customers, improving quality of service, achieving award & recognition, improving the image of the hotel and technologies influences were ranked subsequently as the main motivation factor with the mean values of 4.07, 4.06, 3.94, 3.93 and 3.71 respectively. However, another commonly well known environmental practices motivational factors such as improve the relationship with the local community; environmental protection/conservation; government incentives and pressure from stakeholder with mean values of 2.60, 2.55, 2.42 and 2.23 respectively, were perceived as moderately least influential motive factors by Addis Ababa hotels.

Next, the above listed motivating factors are presented, described and analyzed in detail with figures and respective percentage distribution sequentially based on their ranks.

Figure 4: 1 Percentage Distribution of Cost Saving



Source: Own survey data (April-May, 2019)

Figure 4:1 indicates that the majority of the respondents were agree (49.59%) and strongly agree (44.72%) that their hotel is engaged in certain environmental practices motivated by cost-saving. About five percent (4.88%) of respondents refrain from giving their responses to identifying whether their hotel was practicing environmental management for cost-saving purpose or not. This data shows that the cost-saving in hotel business operation is highly influential motivations within Addis Ababa hotels. These managers' responses, the business-orientated motivations, were also supported by hotel stakeholders. To present a few narratives received from stakeholders, a key informant from the government office said that; "Both hotel managers and

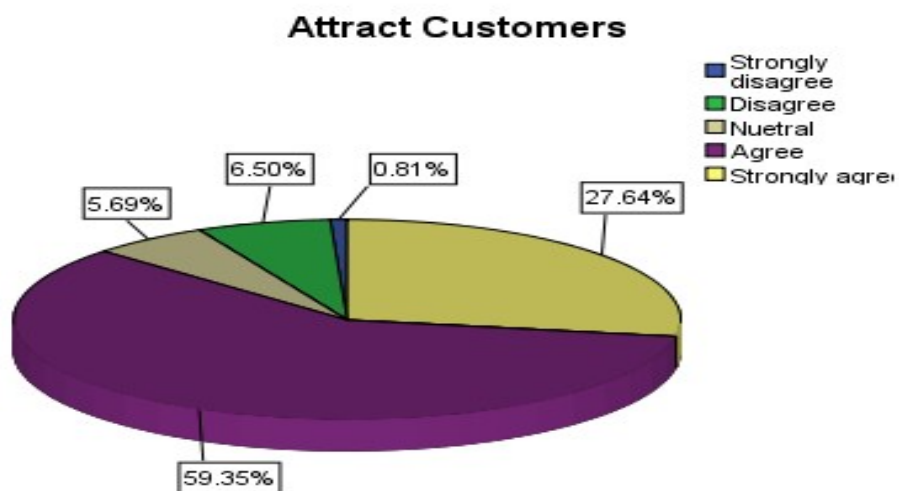
owners focus more on business. Even if they are aware, even if they have adequate knowledge about the impact of hotels, it is hidden because they do not pay any attention to the environment. There is an ignorance of environmental issues among them” (Anonymous 10, personal communication, May 17, 2019).

Another key informant gives his opinion on the motivation of hotel managers and owners as “Here I can give you my opinion! Both owners and managers do not focus on the environmental problem. They focus highly on how to make a profit, and they always worry about how to make money”. One key informant explained as the hotels are practicing environmental management for cost-saving taking an example of water-saving practices as follows;

In Addis Ababa, water supply is challenging for hotels; even now, as we speak, many hotels are buying water because the available water supply is not enough for hotels operation. They spent a lot to buy water. That is why they are forced to drill water from the ground. So mainly, money-saving motivate them to have their source of water rather than committed for environmental sustainability issues (Anonymous 14, personal communication, May 22, 2019).

The following Figure 4.2 displays the percentage distributions of attracting customer as a motivator of environmental practices

Figure 4: 2 Percentage Distributions of Customer Attractions



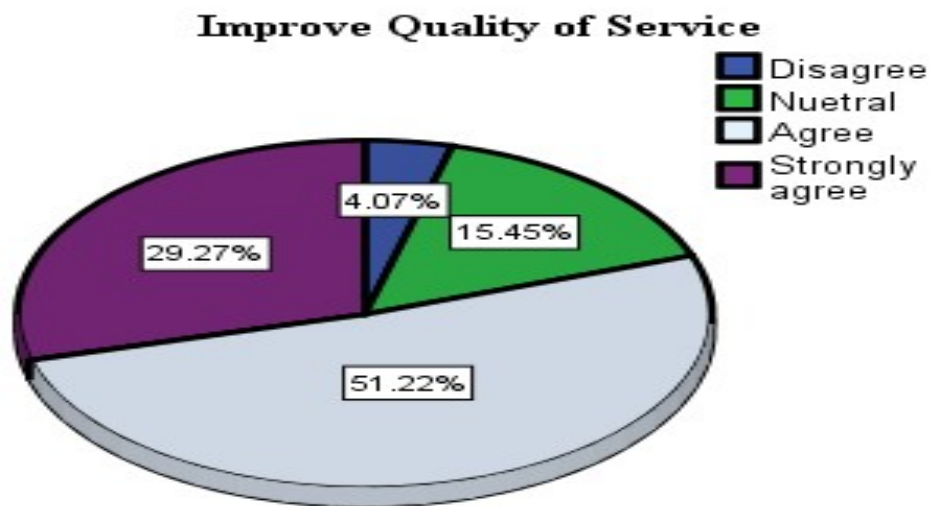
Source: Own survey data (April-May, 2019)

This figure indicates more than half (59.35%) and about 27.64% of respondents agreed and strongly agreed respectively, as the customer attraction motivate environmental management activities at their hotels. However, some significant percentage (7%) of research participants responded that they had not considered environmental sustainability practices as a customer attraction factor. These data imply that hotels participate in environmental managements in order to attract customers. Qualitative data also fully support this finding. The idea of one key informant summarized as follows;

In order to attract customers, hotels are devoted a lot to modernizing their hotel. For example, in order to be competent enough with their competitors' hotel renovate and furnish their premises by installing various water and energy-efficient technologies. These technologies contribute to satisfying customers and then to make them loyal. So indirectly, hotels are practicing environmental management (Anonymous 8, personal communication, May 16, 2019).

Figure 4.3 displays the percentage distributions of improving the quality of services as a motivator of environmental practices

Figure 4: 3 Percentage Distribution of Improving Quality of Services



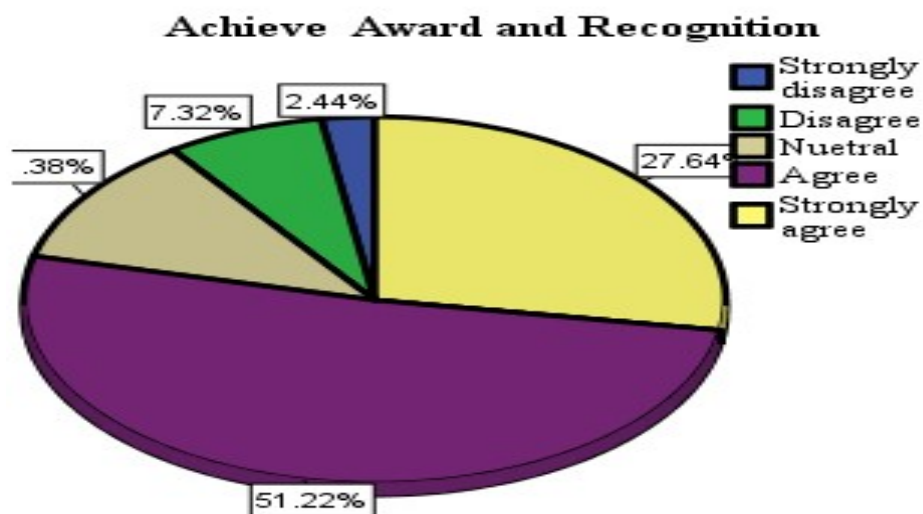
Source: Own survey data (April-May, 2019)

This figure 4:3 indicates that more than half (51.22%) of the hotel managers agreed and more than one fourth (29.27%) of them strongly agreed that their current environmental performance motivated by an interest inherently resides in hotels to improve quality of the services provided for guests. About 15% of hotel managers replied that they are neutral rather than to agree or to disagree on considering the environmental practices implemented in their hotel for reason of improving the quality of services. 4% of the research participant/hotel managers disagreed that their environmental practices not intended for services' quality improvement. The qualitative data also support this result. Hotels are always striving to improve their services in order to satisfy their customers. For these procedures, hotels implement managements through practicing furnishing their premise with modern electric and water-saving technologies, using electronic formats, and keeping their environment healthy and clean. During interview one stakeholder, Anonymous 10 (personal communication, May 17, 2019) confirmed these result as;

...for example, in order to provide quality services and keep the hotel premise attractive, these day hoteliers invest on modern technologies such as bulbs, electric appliances, hand wash faucets, toilets, showerheads and many more technologies. These play a role in motivating environmental practices within hotels.

The following Figure 4:4, Display the percentage distributions of achieving recognition and award as a motivator of environmental practices.

Figure 4: 4 Percentage Distribution Achieving Recognition and Award



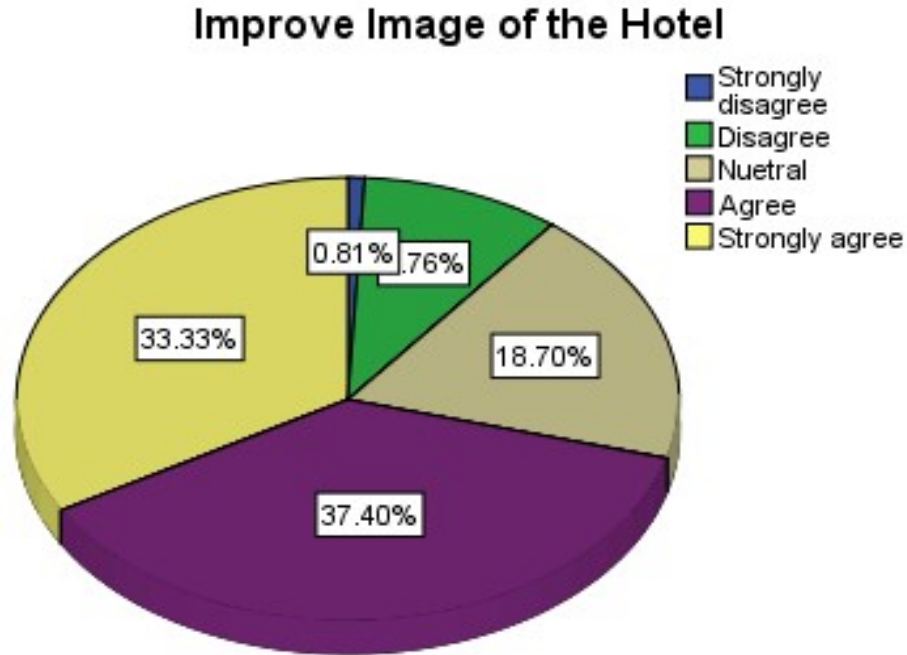
Source: Own survey data (April-May, 2019)

From Figure 4:4, it possible to view that the majority of hotels (51.22% agreed and 27.64% strongly agreed) respond that award and recognition played a supportive role in implementing environmental practices. About 11.38% of respondents did not have any idea about whether environmental management is practiced for the achievement of award and recognition. Furthermore, relatively small numbers of respondents (10%) disagree with the concept of implementing environmental practices for getting award and recognition. So, getting an award is among one motivating factors for environmental practices. Key informant interviews also strength this finding. Stakeholders mentioned that Addis Ababa hotels are also motivated to practices particular environmental management in order to get star award from Ethiopian Ministry of Culture and Tourism office. In order to get a star grade, hoteliers are expected to implement specific environmental requirements mentioned in *the Ethiopian Hotel Star Rating Standard Manual*. In Ethiopia, getting star grad award enables hotels to achieve public recognition and image improvements. So hotels participate in environmental practice at some level to achieve the star grade. According to the narration of one informant;

Hotels have the interest to get to upgrade their star level that is awarded by the Ministry of Culture and Tourism. As a result of most of the times, they strive to practice an environmental sustainability practice written into Ethiopian Hotel Star Rating Standard Manual. In Ethiopia, achieving star grade award has a contribution to enable hotels to get recognitions of customers and other stakeholders (Anonymous 15, personal communication, May 22, 2019).

Figure 4:5 displays the percentage distributions of improving the image of the hotel as a motivator of environmental practices.

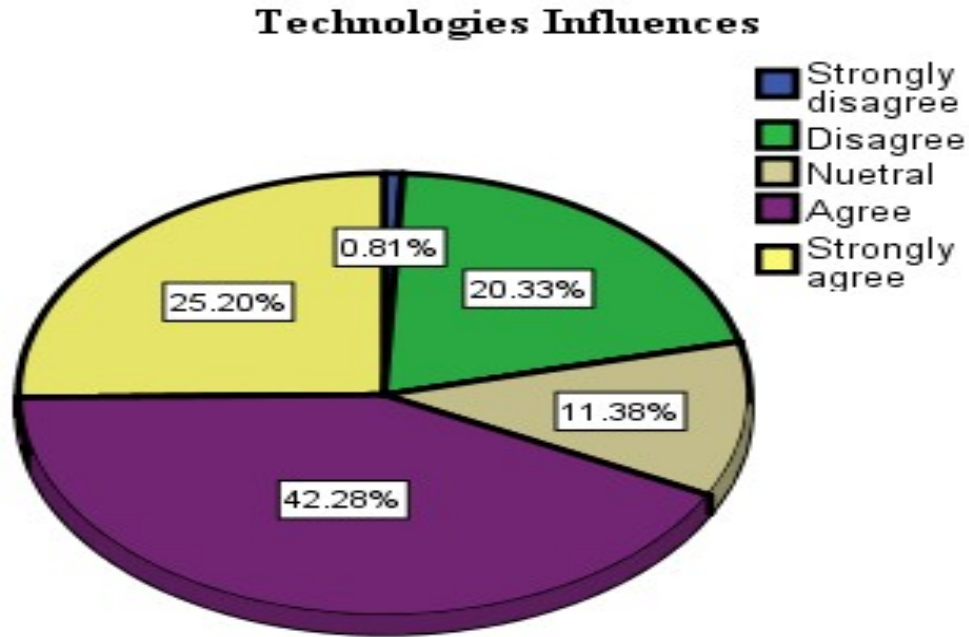
Figure 4: 5 Percentage Distribution of Improving Image of Hotel



Source: Own survey data (April-May, 2019)

As shown in **Figure 4.5**, 70.73% (33.33% strongly agree, and 37.40% agree) of hotel managers said that they were implements environmental sustainability practices to increase their image in the market. About 19% stated that they have no idea whether they implement environmental sustainability practices to improve the image of their hotels. Less than ten percent of the hotels respond that image improvement does not push them to implement environmental sustainability practices. Figure 4:6 displays the percentage of distributions of technologies advancement as an influence to implement environmental practices.

Figure 4: 6 Percentage Distributions of Influences of Technology



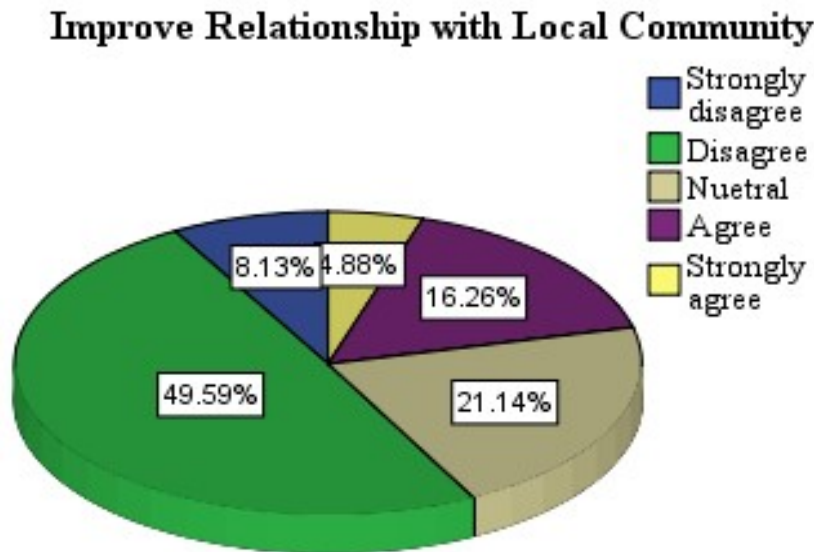
Source: Own survey data (April-May, 2019)

Figure 4:6 shows about 67.5% (25.2% strongly agreed, and 42.28% agreed) of Addis Ababa hotel manager responds that advancement of technology contributed to environmental management practices. About 11% of managers remain neutral in responding to the question. However, more than one-fifth of the participants (21%) do not agree as modern technology is influencing as initiating factor environmental management practices in their hotel. From these descriptions, it is possible to summarize that the technology installed in hotels play a significant role in pushing to practice environmental sustainability practices. Data received from also ascertain this finding. As hotels are competing for a business, they introduce a new working procedures and technologies which enable them to implement certain environmental practices. Concerning the contribution of modern technology to environmental practices, one informant said that “.... improvement of self technologies like self-controlling water funnels and electric bulbs, the production of the central boiling system are also contributed a lot for sustainable

environmental practices like water and energy-saving practices” (Anonymous 1, personal communication, May 10, 2019).

The following Figure 4:7 displays the percentage distributions of working to improve the relationship with the local community as a motivator of environmental practices.

Figure 4: 7 Percentage Distribution of Improving Relationship with Local Community



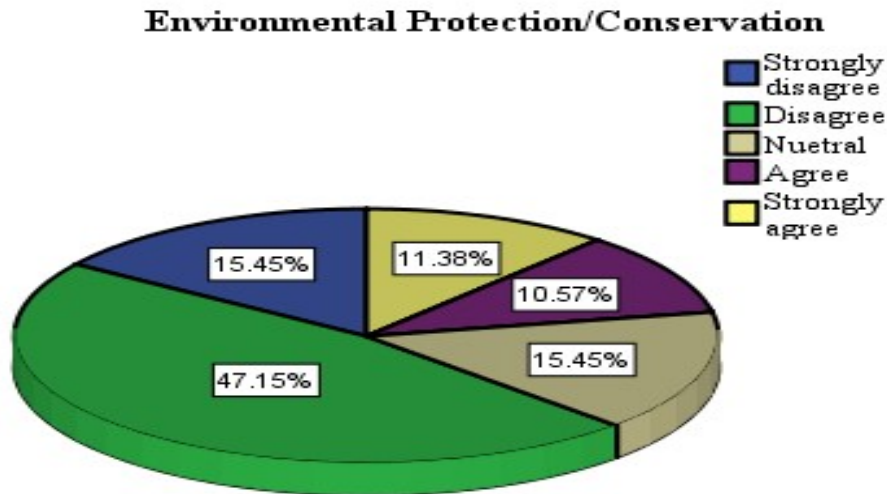
Source: Own survey data (April-May, 2019)

From the above figure, it is possible to view that majority of the survey respondent replied disagree (49.6%) and strongly disagree (8.1%) toward perceiving the implementation of environmental practices for strengthening the relationship between their hotel and the local community. Among the research participant managers’ more than one fifth (21.14%) responded neutrally. Furthermore, only 16.26% of hotels replied that they practice environmental management for improving the relationship between the hotel and local communities. Stakeholders explained the low participation of hotels on activities like social corporate. One key informant narrated that “I know some hotels working for local communities through donating of

a materials charity organization and supporting of schools. Besides, few hotels were also participating in improving local infrastructure such as cobblestone road construction in villages”.

Figure 4:8 displays the percentage of distributions of environmental protection as a motivator of environmental management practices in the hotel.

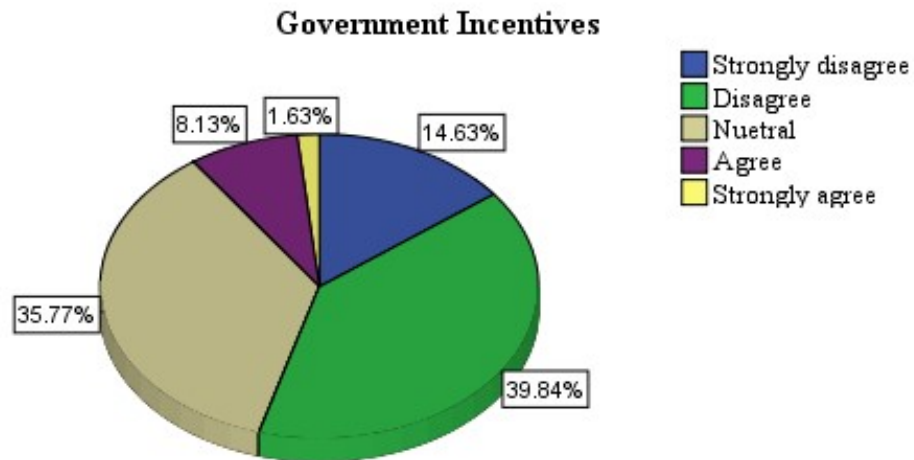
Figure 4: 8 Percentage Distributions of Environmental Protections



Source: Own survey data (April-May, 2019)

Figure 4:8 shows that only more than one-fifth percent (21.92%) of the Addis Ababa hotels are practicing environmental managements in their hotels due to their commitment to environmental protection issues. About 15.45% did not mention their perception agreement or disagreement; they remain neutral to provide their answer. Nevertheless, the majority of hotels (47.15% disagree; 15.45% strongly disagree) responds that their primary motivations in environmental practices are not environmental commitments. The following Figure 4:8 display the percentage distributions of government incentives as a motivator of environmental management practices in the hotel.

Figure 4: 9 Percentage Distributions of Government Incentives



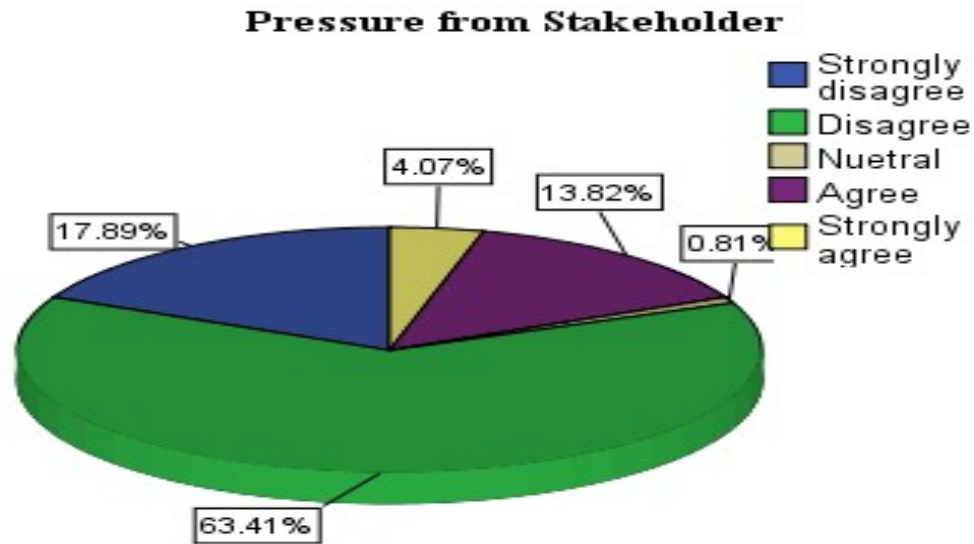
Source: Own survey data (April-May, 2019)

According to Figure 4:9, almost 55% of hotel managers indicated that the government incentive does not work in their hotel to motivate them to implement environmental management. A significant number of respondents (36%) of hotel managers neither agreed nor disagreed that there are motivated by government incentives for the adoption of environmental management. However, nearly 10% of respondents have strongly agreed/agreed on having any government incentive helped them to practices environmental management. This analysis implies that hotels have a low commitment to environmental protection. The stakeholders' views and response support this analysis. Majority of hotels ignore environmental issues. The narration of one stakeholder is quoted here.

There is an ignorance of environmental issues among both hotel managers and owners. Even if they are aware, even if they have adequate knowledge about the impact of hotels, it is hidden because they do not have any attention to the environment. They focus more on business (Anonymous 13, personal communication, May 20, 2019). Another key informant gives his opinion on the motivation of hotel managers and owners as "Here I can give you my opinion! Both owners and managers do not focus on the environmental problem. They focus highly on how to make profit, and they always worry about how to make money" (Anonymous 12, personal communication, May 20, 2019).

Figure 4:10 displays the percentage distributions of stakeholder pressure as a motivator of environmental management practices in the hotel.

Figure 4: 10 Percentage Distribution of Pressure from Stakeholders



Source: Own survey data (April-May, 2019)

The figure 4:10 results show that 81.3%% of the hotel managers responded (17.9% strongly disagree, and 64.4% disagree) pressure from stakeholders was not the main reason that would lead to implementation of environmental management practices; and only 18% of hotel managers believed that pressure from stakeholders are motivated them implement environmental management practices.

The most influential environmental practices’ motivations are to save operational cost, to attract customers, service quality improvement, to achieving award and recognition, to improve image of the hotel, and the influences of technology advancement In addition, the rest factors such as to improve relationship with local community; to protect/conservе environment; the government incentives and the pressure from stakeholders are analyzed as less influential motivators. These show that the most forefront motivators were the internal factors and external factors are less influential in motivating Addis Ababa hotel for environmental practices.

4.3.1. The Correlation of Hotels' Background and the Environmental Practices' Drivers

A chi-square cross-tabulation correlation test was run to determine if there was a correlation between any of the environmental practices motivators and the hotels' background data. The following table summarizes the key correlation data between the environmentally sustainability practices' motivators within hotels and hotel classifications in grade.

Table 4: 10 Association of Environmental Practices' Motivators and Hotel Category

Motivators	Hotel Category	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	X ²	P
Potential Cost Saving	Preferred				45.0%	55.0%	100.0%	21.795	.113
	One star			7.7%	69.2%	23.1%	100.0%		
	Two star			7.1%	60.7%	32.1%	100.0%		
	Three star		3.0%	9.1%	39.4%	48.5%	100.0%		
	Four star				30.0%	70.0%	100.0%		
	Five star				11.1%	88.9%	100.0%		
Improve Quality of Service	Preferred			15.0%	50.0%	35.0%	100.0%	36.922	.001
	One star		7.7%	7.7%	76.9%	7.7%	100.0%		
	Two star		7.1%	21.4%	60.7%	10.7%	100.0%		
	Three star		6.1%	24.2%	51.5%	18.2%	100.0%		
	Four star			5.0%	40.0%	55.0%	100.0%		
	Five star				11.1%	88.9%	100.0%		
Technologies Influences	Preferred		15.0%	25.0%	40.0%	20.0%	100.0%	80.345	.000
	One star		46.2%	15.4%	38.5%		100.0%		
	Two star	3.6%	39.3%	17.9%	35.7%	3.6%	100.0%		
	Three star		15.2%	6.1%	66.7%	12.1%	100.0%		
	Four star				35.0%	65.0%	100.0%		
	Five star					100.0%	100.0%		
Achieve Award and Recognition	Preferred		10.0%	20.0%	40.0%	30.0%	100.0%	50.915	.000
	One star	7.7%	15.4%	15.4%	61.5%		100.0%		
	Two star	7.1%	3.6%	14.3%	64.3%	10.7%	100.0%		
	Three star		12.1%	12.1%	57.6%	18.2%	100.0%		
	Four star				50.0%	50.0%	100.0%		
	Five star					100.0%	100.0%		
Government Incentive	Preferred	10.0%	25.0%	40.0%	20.0%	5.0%	100.0%	21.593	.363
	One star	30.8%	46.2%	15.4%	7.7%		100.0%		
	Two star	10.7%	42.9%	35.7%	10.7%		100.0%		
	Three star	21.2%	45.5%	30.3%	3.0%		100.0%		
	Four star	5.0%	45.0%	45.0%		5.0%	100.0%		
	Five star	11.1%	22.2%	55.6%	11.1%		100.0%		

Continued

Motivators	Hotel Category	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	X ²	P
Improve Image of the Hotel	Preferred			25.0%	40.0%	35.0%	100%	42.322	.003
	One star		23.1%	15.4%	46.2%	15.4%	100%		
	Two star	3.6%	14.3%	21.4%	39.3%	21.4%	100%		
	Three star		15.2%	24.2%	45.5%	15.2%	100%		
	Four star			10.0%	30.0%	60.0%	100%		
	Five star					100.0%	100%		
Attract Customers	Preferred		5.0%		75.0%	20.0%	100%	58.709	.000
	One star		15.4%	7.7%	61.5%	15.4%	100%		
	Two star		3.6%	17.9%	67.9%	10.7%	100%		
	Three star	3.0%	12.1%	3.0%	69.7%	12.1%	100%		
	Four star				40.0%	60.0%	100%		
	Five star					100.0%	100%		
Environment Protection	Preferred	10.0%	50.0%	10.0%	20.0%	10.0%	100%	70.740	.000
	One star	30.8%	61.5%	7.7%			100%		
	Two star	25.0%	60.7%	7.1%	3.6%	3.6%	100%		
	Three star	18.2%	60.6%	15.2%	3.0%	3.0%	100%		
	Four star		10.0%	45.0%	20.0%	25.0%	100%		
	Five star		11.1%		33.3%	55.6%	100%		
Pressure from Stakeholder	Preferred	5.0%	65.0%	5.0%	20.0%	5.0%	100%	34.722	.022
	One star	30.8%	61.5%		7.7%		100%		
	Two star	25.0%	67.9%		7.1%		100%		
	Three star	27.3%	66.7%		6.1%		100%		
	Four star		60.0%		30.0%	10.0%	100%		
	Five star	11.1%	44.4%		22.2%	22.2%	100%		
Improve Relationship with Local Community	Preferred	10.0%	20.0%	25.0%	35.0%	10.0%	100%	47.707	.000
	One star	7.7%	61.5%	23.1%	7.7%		100%		
	Two star	17.9%	42.9%	28.6%	10.7%		100%		
	Three star	6.1%	75.8%	9.1%	6.1%	3.0%	100%		
	Four star		45.0%	25.0%	30.0%		100%		
	Five star		33.3%	22.2%	11.1%	33.3%	100%		

Source: Own survey data (April-May, 2019)

Potential cost-saving and government incentive have no significant association among different hotel categories ($P > .005$). The more significant proportion of respondents of all hotel categories agreed with cost-saving as a potential motivator while they are similarly impartial concerning government incentive as a motivating factor.

On the other hand, improve quality of service, technologies influences, achieve award and recognition, improve the image of the hotel, attract customers, environmental protection/conservation and pressure from stakeholder and improve the relationship with the local community have a significant association with different hotel categories ($P < .005$). It indicates that these variables have a different level of motivating level in different hotel categories or ranks.

The cross-tabulation of these variables indicates that the majority of preferred, one star, two-star and three-star hotel respondents agree on the variables as motivating while four-star and five-star hotels strongly agree as a motivating variable. This, in turn, shows that improves quality of service, technologies influences, achieve award and recognition, improve image of the hotel, attract customers, environmental protection/conservation and pressure from stakeholder and improve relations with local community are relatively taken to be more motivating factor in high ranked hotels than the low ranked ones.

The following table summarizes the critical correlation data between the environmentally sustainability practices' motivators within hotels and hotel ownership type.

Table 4: 11 Correlations between Environmental Practices' Motivators and Hotel Ownership

Motivators	Hotel Ownership	Response					Total	X ²	P
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree			
Potential Cost Saving	Independent		0.9%	5.1%	47.0%	47.0%	100%	6.411	.093
	Franchise					100.0%	100%		
Improve Quality of Service	Independent		4.3%	16.2%	52.1%	27.4%	100%	4.639	.200
	Franchise				33.3%	66.7%	100%		
Technologies Influences	Independent	0.9%	21.4%	12.0%	44.4%	21.4%	100%	18.720	.001
	Franchise					100.0%	100%		
Achieve Award and Recognition	Independent	2.6%	7.7%	12.0%	53.8%	23.9%	100%	16.511	.002
	Franchise					100.0%	100%		
Government Incentive	Independent	14.5%	41.9%	33.3%	8.5%	1.7%	100%	7.135	.129
	Franchise	16.7%		83.3%			100%		
Improve Image of the Hotel	Independent	0.9%	10.3%	19.7%	39.3%	29.9%	100%	12.615	.013
	Franchise					100.0%	100%		
Attract Customers	Independent	0.9%	6.8%	6.0%	62.4%	23.9%	100%	16.511	.002
	Franchise					100.0%	100%		
Environmental Protection	Independent	16.2%	49.6%	16.2%	11.1%	6.8%	100%	49.110	.000
	Franchise					100.0%	100%		
Stakeholders Pressure	Independent	18.8%	65.0%	0.9%	13.7%	1.7%	100%	34.858	.000
	Franchise		33.3%		16.7%	50.0%	100%		
Improve relationship with community	Independent	8.5%	50.4%	20.5%	16.2%	4.3%	100%	3.091	.543
	Franchise		33.3%	33.3%	16.7%	16.7%	100%		

Source: Own survey data (April-May, 2019)

Potential cost-saving, improve quality of service, government incentive and improve the relationship with the local community has no significant association with hotel ownership type ($P > .005$). The more significant proportion of respondents of both hotel ownership types agreed to these variables as potential motivators with no significant difference between independent and franchise concerning variables motivation level.

Technologies influences, achieve award and recognition, improve the image of the hotel, and attract customers, environmental protection/conservation and stakeholders' pressure have a significant association with hotel ownership type ($P < .005$). This is made indicated in the cross-tabulation that the variables are taken to be more motivating factors in franchise hotels than the independent one.

Though some encouraging environmental sustainability practices existed within Addis Ababa hotels, still a significant number of practices were blocked by some factors. These principal blockage factors analysis and descriptions were presented in the following section.

4.4. Barriers to Environmental Sustainability Practices in Hotels

This part deals with the hotel managers' responses on the pre-listed relevant factors considered as challenges for implementations of the operational environmental sustainability practices in hotels. Both mixed internal and external factors were presented for hotel managers in close-ended with five Likert scales. Managers were asked to indicate the level of their agreement by choosing the appropriate answer associated to questions arranged with five-point Likert scale listed from strongly disagree to strongly agree.

Table 4: 12 Descriptive Statistics of Environmental Sustainability Practices’ Barriers

Items	N	Rank	Mean	Std. Deviation
External Barrier				
Lack of government assistance	123	1	3.95	1.039
Lack of government regulation	123	2	3.82	1.079
Lack of promotion of environmental practice	123	3	3.71	1.014
Insufficient physical infrastructure	123	4	3.57	1.160
Internal Barriers				
Lack of support from owners	123	1	3.91	.887
Lack of formal policy in hotel for environmental practices	123	2	3.78	1.075
Expense associated with environmental practices	123	3	3.65	1.032
Lack of specialized staff for environmental practice	123	4	3.63	1.082
Valid N (listwise)	123			

Source: Own survey data (April-May, 2019)

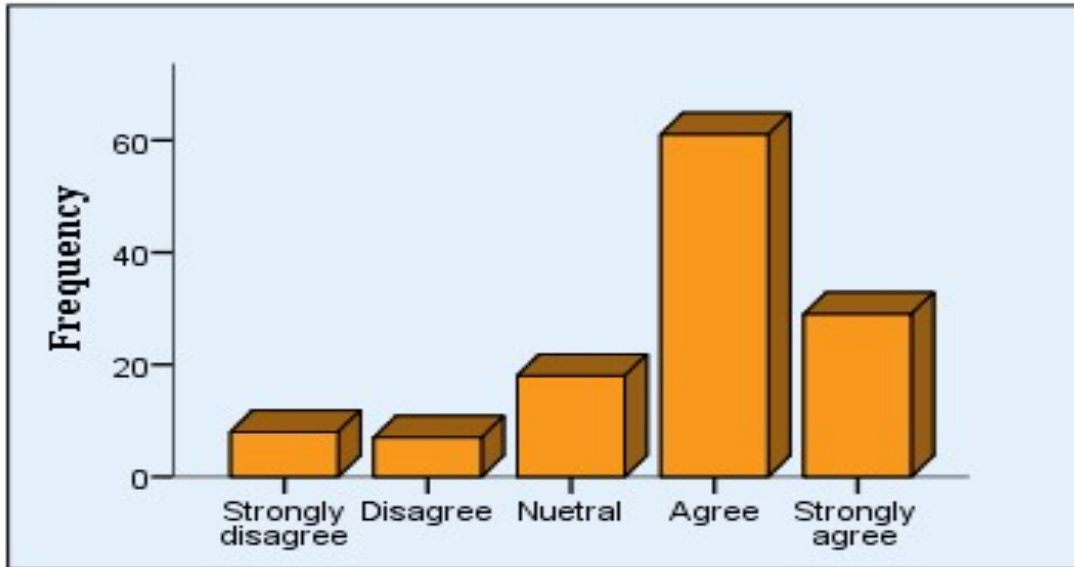
Note: The mean and standard deviation were computed based on numerical values assigned to the responses as: Strongly disagree=1; Disagree =2; Neutral=3; Agree=4; Strongly Agree=5

4.4.1. Internal Environmental Practices’ Barriers

Table 4.12 illustrates the key internal barriers sequentially ranked based on the quantitative study analyses. According to the survey responses, among the internal barriers, the lack of support from owners was ranked first with the highest mean score of 3.91. Next to that, lack of internal environmental policy in hotels; expense associated with environmental practices and lack of specialized staff for environmental practice with the mean of 3.78, 3.65, and 3.63, respectively; ranked.

The internal environmental sustainability practices barriers have been analyzed and reported, as shown in the following section. The first ranked barrier is the lack of hotel investors’ support for environmental practices. Figure 4:11 displays the percentage distributions of lack of owners Support as a barrier of environmental management practices in the hotel.

Figure 4: 11 Percentage Distribution of Lack of Owners Support



Source: Own survey data (April, 2019)

The above figure shows that the majority of the hotels (73.2%) strongly agreed/agreed that the lack of owners support on environmental practices was the great barrier for environmental management practices. About fifteen per cent of hotels responded they are neutral. The small number of hotels (12.2%) was not considered the owners support as a challenge for environmental practice performances. From these data, it is possible to be assured that the lack of hotel business owners' support is a tremendous and most common barrier for Addis Ababa hotels for implementation of environmental sustainability practices.

As of the response of semi-structured interview respondents; this is happening due to lack of concern and lack of environmental awareness among Ethiopian hotel business investors. The attitudes of hoteliers are highly focused on business making rather than paying and attention to the environment. Besides that, most of the time, owners are not hotel professionals. They invest in the hotel sector only because of the money and the interest they do have within the business. Some of key responses of stakeholders included in the analyses were quoted as follows.

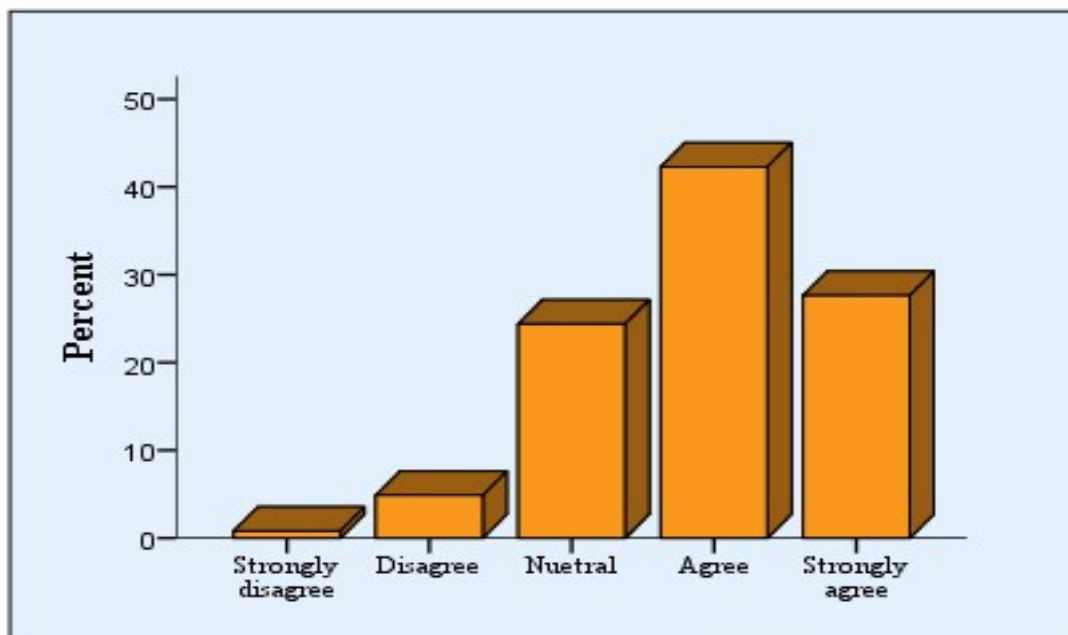
I think it is a matter of awareness; the majority of hotel investors do not know how to treat the environment. Owners are not hotel professionals; rather, they are moneymakers. If they have the awareness, they would have treated the environment, and at the same time, they would save money from it (Anonymous 2, personal communication, May 10, 2019).

Another key informant added and explained the absence of hoteliers' support as:

In the first places, most of the hotel owners are not hotel professionals. They have no idea about hotel impacts. Since they have money, they have built hotels. So to go according to the environmental requirement, hotel owners are not ready to support the staff/professionals on environmental practices. I think much awareness to be done in the subject area (Anonymous 5, personal communication, May 13, 2019).

The second most influential environmental sustainability practices barrier is associated with the absence of formal environmental policy in hotels. Figure 4:12 displays the percentage distributions of absence of formal environmental policy as a barrier of environmental management practices in the hotel.

Figure 4: 12 Lack of Policy in Hotel for Environmental Practices



Source: Own survey data (April, 2019)

Figure 4.12 shows that 27.6% of hotels were strongly agreed and 42.3% of hotels were agreed that they consider the environmental policy as the top significant barrier on implementations of environmental practices. Furthermore, 4.9% of respondents do not complain the absence of a policy on the implementations of hotel environmental practice as a barrier and 24.4 % of managers do not have any idea of agreeing or disagree if the absence policy were considered as a barrier.

In addition to these quantitative data analyses, the data from key informant sourced, Addis Ababa hotel lacks internal policy for environmental management practices. But, hotels have business-oriented internal operational policies. These policies have certain elements that indicate environmental practices procurement procedures, waste management, housekeeping management, etc. However, the majority of hotels lack environmental policies, especially the local independent hotels. Concerning the issue of environmental practices in Addis Ababa hotels, one informant discussed as follows:

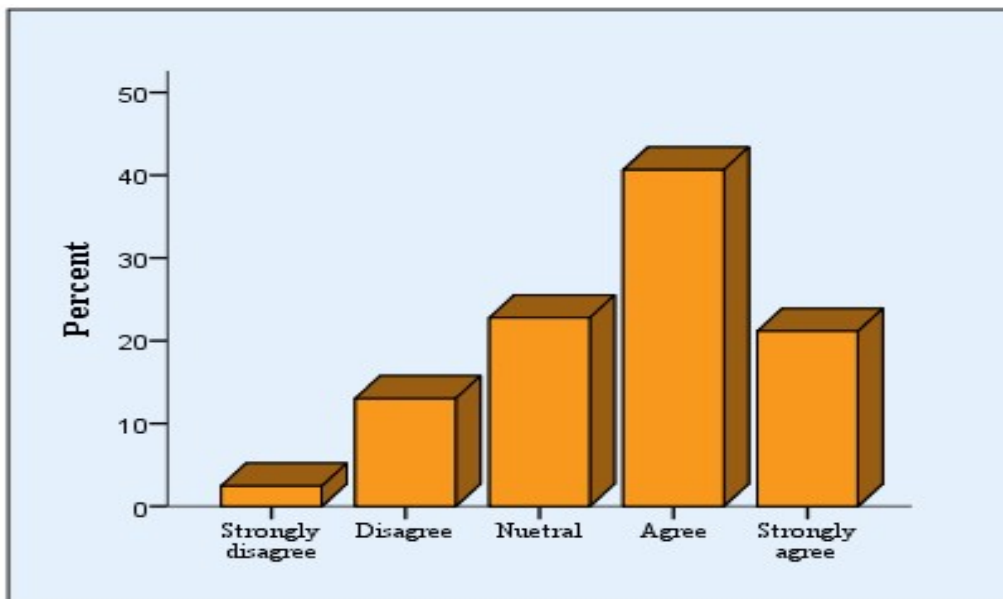
Those for managers' of independent hotels there is no policy as a requirement for them execute or implement the environmental sustainability practice. They do not have such a policy, so they do not mind about it. For international franchised hotels, they have a policy called Quality Assurance audit (QA). QA takes place once or twice in a year, and a general manager performance is evaluated by it. So basically the franchised hotel manager should follow the same procedure written in QA (Anonymous 12, personal communication, May 20, 2019).

Another key informant narrated the lack of internal environmental policy as;

.....as far as I know, except few hotels, majority of them do have only general operation procedures, what we call '*metadadery demb*' in Amharic, it means internal operation legislation. I have been working with hotels for the past eight years, except few hotels, they don't have policies separately for environmental sustainability alone. But some internal operation the legislation contains how to manage wastes, water etc. but it is not strong that much, and honestly it was not intended to for environmental commitment purpose. They focus mainly on business making and expense management area (Anonymous 13, personal communication, May 20, 2019).

The third most influential internal barrier is an expense related to implementing environmental sustainability practices. Figure 4:13 displays the percentage distributions of expense related to implementing environmental practices a barrier of environmental management in the hotel.

Figure 4: 13 Percentage Distribution of Expense for Environmental Practices



Source: Own survey data (April, 2019)

Figure 4.13 shows that about 40.7% and 21.1% of the hotel managers are agreed and strongly agreed respectively on the significance of high expense for greening as a barrier in the hotel environmental practices. At the same time, 15.4% of respondent managers do not consider the expense associated with environmental practices as a barrier.

The qualitative part participants strongly supported this finding. According to these respondents, some technologies required for environmental sustainability practice needs enormous capital and as well as it takes long payback periods. Due to this factor, it is challenging for some hotel to afford it. For example, technologies required for water treatment, materials recycling machines, rainwater harvesting equipment, the expense of affording land for the garden were the main challenge for hotels to afford. One example narrated by an informant from Addis Ababa Culture and Tourism Office, as:

There are very few hotels those re-use materials with minimal extent. Also, there were some hotels re-use water in swimming pool, but still they are very limited in number. However,

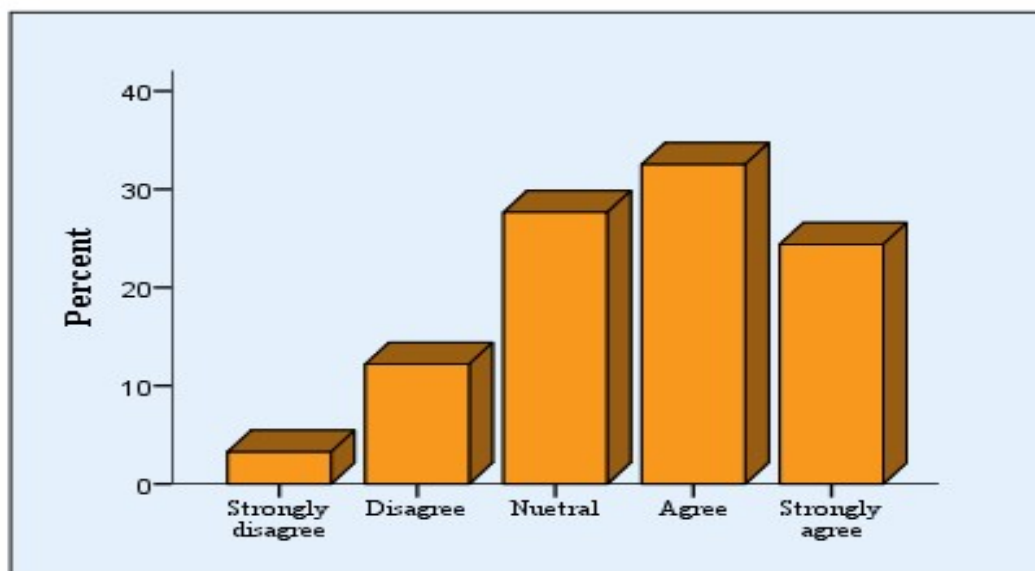
no hotel re-uses liquid wastes; no hotels re-use it at all. The treatment plant needs vast capitals (Anonymous 4, personal communication, May 13, 2019).

In this study, another informant added that;

For example, the cost of land is not affordable in Addis Ababa for hotels to develop various infrastructures. Furthermore, though fast-growing as hotel market demand is not that much hot in Ethiopia, the invested money on infrastructure payback period is very long. So even if they do have environmental awareness, investors' are not confident enough to invest such substantial money (Anonymous 6, personal communication, May 16, 2019).

The next sub section presents, another key barrier for environmental sustainability practices, the lack of specialized staff as critical barrier.

Figure 4: 14 Percentage Distribution of Lack of Specialized Staff as a Barrier



Source: Own survey data (April, 2019)

Figure 4.14 reveals that the majority of respondents (56.9%) in the study said the lack of specialized staff for environmental management was a significant barrier to the implementation of environmental sustainability practices in their hotel. A significant number of managers (27.6%) remain neutral to give their idea and about 15.5% of managers strongly disagree/disagree on considering the lack of specialized employees as a significant barrier on environmental practices.

For hotels, it is not easy to guide environmental management without the presence of professionals. In his speech, one hotel consultant stakeholder stated that;

I have been working with many hotels, but I have not been experienced yet any position allocated for environmentalists in local independent hotels, whereas franchised hotels have positions with various names (Anonymous 15, personal communication, May 22, 2019).

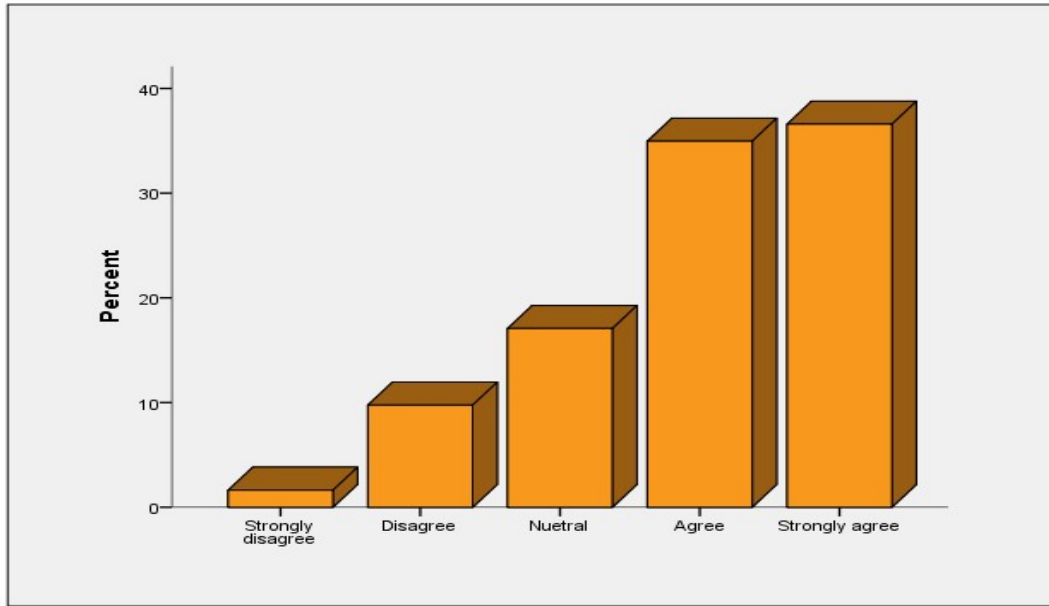
The absence of environmental specialists' positions shows that hotels did not give sufficient concern for environmental protection. This situation hinders the hotels' environmental sustainability practices in Addis Ababa hotels.

4.4.2. External Environmental Practices' Barriers

As mentioned in the above table 4:12, the critical external barriers that has been identified in the study were ranked based on the responses of research participants includes the lack of government assistance; lack of government regulation; lack of promotion of environmental practice and insufficient physical infrastructure with the mean of 3.95, 3.82, 3.71 and 3.57 respectively.

Based on the study, among the identified external barriers, the lack of government assistance is the most influential factor that hinders an introduction of environmental sustainability practices in Addis Ababa Hotel industry. Lack of government assistance as a barrier in the hotel is described here in detail next.

Figure 4: 15 Percentage Distribution of Lack of Government Assistance



Source: Own survey data (April, 2019)

As shown in Figure 4.15, 36.6% of hotels strongly agreed, and 35% of hotels agreed that lack of government assistance is a big challenge for the implementation of environmental management practices. According to this result, there were 9.8% hotels disagree, and 1.6% of managers strongly disagree on assuming the absence of government assistance as a sort of challenge. The rest respondent, about 9.8% neither agree nor disagree on the idea at all.

This analysis reveals that the problem of environmental management concern is not only limited the hotel business owners alone, but also the government ignored the issue. The government makes little assistance focusing on hotel business operation, rather than making special attention to environmental management issues. Government permits only a few incentives for hotel starters as hotel investment motivation; which does not focus on environmental issues. In addition to that, the government also has a weak side on coordinating and working on hoteliers to make their hotel business more environmentally friendly. That is why the majority of hotels consider the lack of government assistance as a critical challenge for environmental sustainability practices. If the government were well supported the hotel businesses on environmental issues, it would have been there better environmental practices relatively within the hotel industry. The government should work and encourage the hotel investors on the environment. For example, if the government

requests investors to bring the report of Environmental Impact Assessment and the building design as essential criteria at the beginning, to get business hotel license. To the minimum, this can pave the way for hotels to environmental initiatives. Some explanations from key informants are quoted as follows. According to one key informant, it is a must for the government to work with hotel owners to make the industry more environmentally friendly. This stakeholder informant said:

Let alone assistance; there is no proper follow up for progressing hotel projects from the government. For example, for star grade awarding process MoCT conducted hotel evaluation twice only in the last ten years. So I can say, other than some incentives permitted them like to import specific equipment to encourage hotel industry expansion, there is no support or motivate for hotels to be environmentally sustainable yet (Anonymous 6, personal communication, May 16, 2019).

According to this informant;

If we need achievements in terms of environmental management in the hotel sector, we need to work with hotel business owners. We need to create adequate environmental awareness for investors, and then they can pay at least an attention to environmental issues rather than running short term economic profit only. An owner can influence both managers and employees of the hotel to practice environmental management (Anonymous 6, personal communication, May 16, 2019).

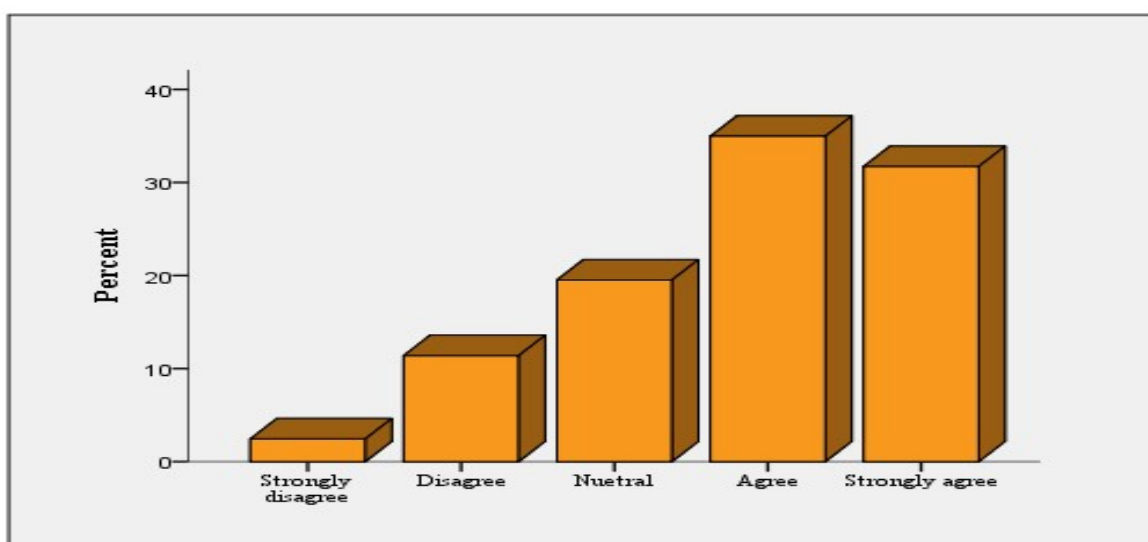
Another Key informant explained some procedural gap among the hotel sector and the government bodies to make hotel sustainable. He said;

To get investment permission (business license), Investors are not obligated to bring any document that assures the environmental sustainability of hotel business; even we do not have any regulation to enforce hotel investors to bring environmental impact assessment. I do not think so if both the hotel investors and our offices do have adequate awareness of the requirements for environmental sustainability in the hotel. While the hotel is ready for operation, in the beginning, we check if it fulfils all requirements to start operation in a safe environment. Nevertheless, we do not have any specialized departments as well as specialized experts that check up the environmental sustainability of hotels during their operation (Anonymous 3, personal communication, May 10, 2019).

One stakeholder narrated the lack of assistance from their office on environmental practices for hotels. “We do not provide any assistance for hotels to work on environmental sustainability practice, but we follow up and supervise to check if they are operating by following other hotel operation regulation rather than focusing on environmental issues” (Anonymous 11, personal communication, May 17, 2019).

The mean value stated in table 4:12 shows the second most serious external barrier to environmental sustainability practices in the hotel industry is the lack of government regulation. So the next subsection deals with the presentation, analysis and description this barrier

Figure 4: 16 Percentage Breakdown of Lack Government Regulation



Source: Own survey data (April, 2019)

The result shows that nearly one-third of respondents (31.7%) strongly agreed and more than one-third of the survey respondents (35%) agreed that absence of government regulation is a significant barrier to implement the environmental practices in their hotel. About 19.5% of respondents are not sure whether the lack of government regulation was a barrier or not in their hotel on environmental sustainability practices. 2.4% of respondents and 11.4% of respondents are strongly disagreed and disagreed respectively on the idea of recognizing the lack of government regulation as a challenge towards environmental sustainability practices in the hotel.

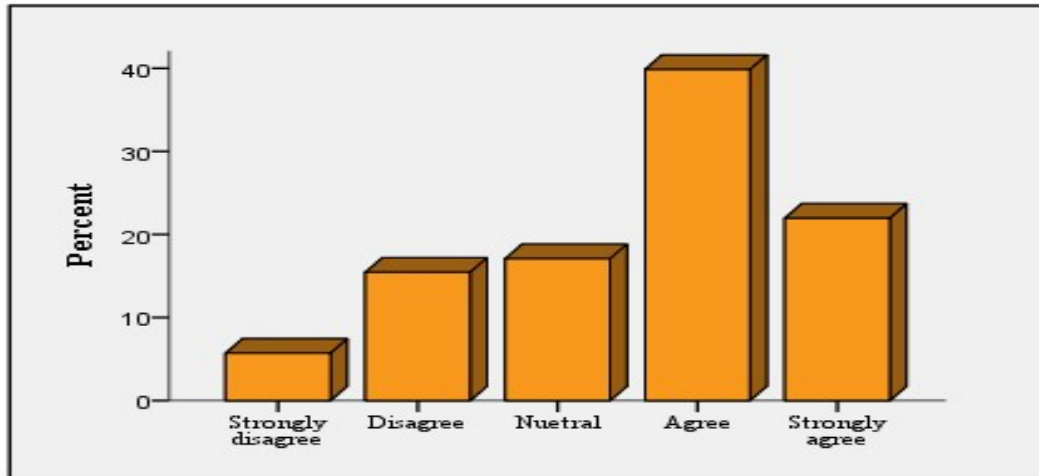
It is clear that the absence of any regulation or deregulation policies for environmental practice hotel becomes serious challenges among Addis Ababa hotels. What makes sense here is, unlike other industries like agriculture and manufacturing, which have a clear environmental policy, the hotel sector lacks policy that enforces or initiates the business to be environmentally friendly. In addition to that, there is a complicated and uncoordinated procedure among the government bodies those licensing, supporting, supervising and following up the hotel business. Government agents like health sector, MoCT, AAC&T offices, Construction office, Land management, EIC, Environmental Protection Authorities and other government organizations work with the hotel industry with very complex networks and unclear procedure that results in loose follow up of environmental issue in the hotel. Stakeholder key informants explained the seriousness of the problem. One key informant stated that “As a country, we do not have any enforcing regulations or motivating policy to practice environmentally sustainable initiatives in hotels yet. In order to develop and implement, such as regulations, there is a lack of cooperation among the concerned bodies” (Anonymous 15, personal communication, May 22, 2019).

Another key informant said:

In Ethiopia, the hotel industry is not like factories. I know there a clear policy on factories which regulate not to damage the environment. I do not see any clear policy on the part of the government. Of course, the Addis Ababa health bureau comes to check the hygiene and sanitation when hotels want to get a trade license. But that is not strict; I can tell you it is a checking point for issuing the hotel trade license only. There should be specific policies that enforce hotels to do EIA before they join the business (Anonymous 6, personal communication, May 16, 2019).

Another key environmental sustainability practices’ barrier is the shortage of infrastructure. According to the study, the lack of physical facility ranked the third most severe issues among the identified external barriers.

Figure 4: 17 Percentage Breakdown of Insufficient Physical Infrastructure as a Barrier



Source: Own survey data (April, 2019)

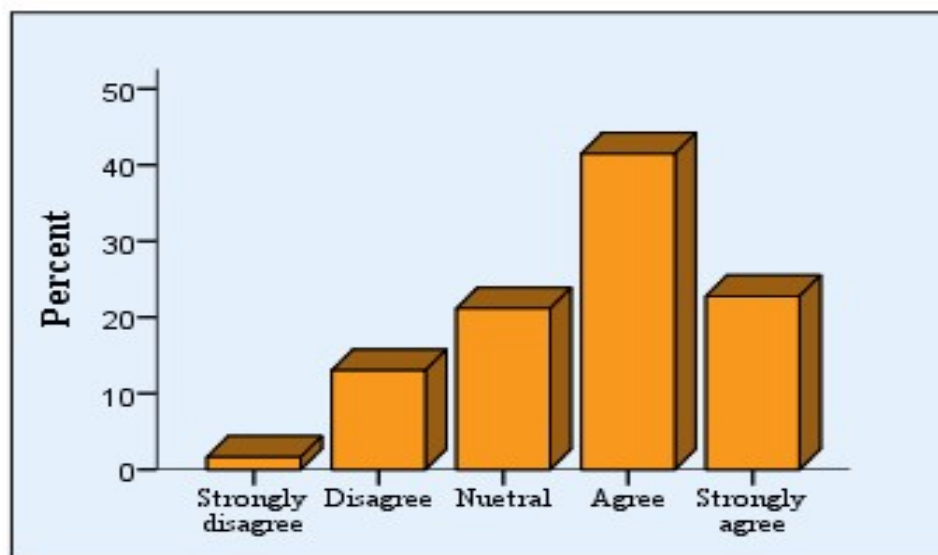
From the total research participants, about 22% and 39.8% of hotels were strongly agreed and agreed respectively on the significance of lack of physical facilities and infrastructure as a barrier for environmental practices. Seventeen percent of hotels did not consider the lack of infrastructure as a challenge for environmental practices. The rest percentage of hotels (21.1%) responded that the absence of sufficient infrastructure did not challenge them. Environmental sustainability management practice in Addis Ababa hotel industry is profoundly affected by the condition of physical infrastructure and facilities. The lack of physical infrastructure has been challenging the practices of environmental management. Specific technologies and physical infrastructure are expensive for hotels to afford or to develop from scratch. As these reason, hoteliers are not voluntary to invest for themselves on the infrastructures. Even if hoteliers are voluntary to develop certain infrastructures to facilitate, it is not easy to regain the capital that would be invested in the infrastructure as it takes a long payback period. In addition to that, the current market demand for a hotel in Addis Ababa is not much high to encourage to invest in facilities required for environmental management. This is mainly linked with a low flow of international tourists. Some ideas of key informants quoted here.

One key informant from Addis Ababa Culture and Tourism Office narrated how many insufficiencies of physical infrastructure are discouraging for hotels to practice the environmental initiatives like as follows:

The lack of adequate physical infrastructure and facilities is one of the substantial challenges for hotels to practice environmental management. For example, if the government developed an adequate water waste drainage system, hotels do not incur the cost to transport liquid wastes. If governments supply sufficient water, hotels do not incur a cost to drill groundwater. Not only these, for example, if our city has sufficient materials recycling centre, solar panel developer and much more other facilities, our hotels never challenged like now. They can invest small capital, and they can practice environmental initiatives. It is challenging for hotels to invest in everything from scratch, but if they get an encouraging environment with good infrastructure, they can easily participate in environmental sustainability practices (Anonymous 4, personal communication, May 13, 2019).

One barrier for environmental practices is the lack of promotion on environmental issues in the hotel industry. The responses' of hotels towards considering the absence of promotion as a challenge for environmental practices are explained here.

Figure 4: 18 Percentage Breakdown of Lack of Promotion on Environmental Practice



Source: Own survey data (April, 2019)

Figure 4.18 indicates that 64.3 % (22.8 % strongly agreed and 41.5% agreed) of managers viewed the lack of promotion as a significant external barrier for the hotels' environmental measures. However, a few numbers of managers (13%) disagreed with considering the lack of promotion as a barrier in their hotel. Twenty-one percent (21.1%) of respondents were remaining neutral on choosing the absence of promotion as an external challenge.

Majority of hotels recognized the absence of promotion as a challenge for environmental practices. If the government and stakeholders worked on environmental promotion using by various media, there would be good environmental knowledge and of awareness among hotel business owners and staff. Moreover, various hotel stakeholders pay attention to environmental issues. The quotes of key informants state the absence of promotion on hotel environmental practices as follows;

I have not heard any media promoting hotels environmental sustainability practices in Ethiopia yet. As a result, I believe that most hotel owners suffer from a shortage of awareness on environmental issues (Anonymous 7, personal communication, May 16, 2019).

Other key informant narrated it as “it is common to hear while hotels are promoting their product and services, but I have not experienced any environmental promotions either from hotels, government or other bodies” (Anonymous 13, personal communication, May 20, 2019).

4.4.3. Corrections of Hotels’ Background and the Environmental Practices Barriers

A chi-square cross-tabulation test was run to determine if there was a correlation between any of the environmental practices barriers and the hotel's background data. The following table summarizes the key correlation data between the environmentally sustainability practices’ barriers within hotels and hotel classifications in grade.

Table 4: 13 Association of Environmental Practices' Barriers and Hotel Category in star

Barriers	Hotel Category	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	X ²	P
Expense associated with environmental practices	Preferred		5.0%	30.0%	45.0%	20.0%	100%	22.766	.300
	One star		7.7%	23.1%	53.8%	15.4%	100%		
	Two star	7.1%	3.6%	17.9%	46.4%	25.0%	100%		
	Three star		18.2%	18.2%	33.3%	30.3%	100%		
	Four star	5.0%	15.0%	30.0%	35.0%	15.0%	100%		
	Five star		44.4%	22.2%	33.3%		100%		
Lack of formal policy in hotel for environmental practices	Preferred		10.0%	15.0%	55.0%	20.0%	100%	18.465	.557
	One star		7.7%	30.8%	46.2%	15.4%	100%		
	Two star	7.1%	10.7%	21.4%	39.3%	21.4%	100%		
	Three star		18.2%	21.2%	42.4%	18.2%	100%		
	Four star	5.0%	15.0%	30.0%	35.0%	15.0%	100%		
	Five star		33.3%	55.6%	11.1%		100%		
Lack of support from hotel owners	Preferred			10.0%	65.0%	25.0%	100%	40.262	.005
	One star			15.4%	46.2%	38.5%	100%		
	Two star			25.0%	50.0%	25.0%	100%		
	Three star		6.1%	30.3%	30.3%	33.3%	100%		
	Four star		15.0%	15.0%	40.0%	30.0%	100%		
	Five star	11.1%	11.1%	66.7%	11.1%		100%		
Insufficient physical infrastructure	Preferred			25.0%	45.0%	30.0%	100%	23.629	.259
	One star		15.4%	15.4%	46.2%	23.1%	100%		
	Two star	10.7%	10.7%	10.7%	42.9%	25.0%	100%		
	Three star	9.1%	21.2%	15.2%	42.4%	12.1%	100%		
	Four star	5.0%	15.0%	15.0%	30.0%	35.0%	100%		
	Five star		44.4%	33.3%	22.2%		100%		
Total		5.7%	15.4%	17.1%	39.8%	22.0%	100%		

cont

Barriers	Hotel Category	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	X ²	P
Lack of promotion of environmental practice	Preferred			30.0%	45.0%	25.0%	100%	24.657	.215
	One star		7.7%	23.1%	53.8%	15.4%	100%		
	Two star		7.1%	25.0%	46.4%	21.4%	100%		
	Three star		18.2%	9.1%	42.4%	30.3%	100%		
	Four star	5.0%	20.0%	25.0%	25.0%	25.0%	100%		
	Five star	11.1%	33.3%	22.2%	33.3%		100%		
Total		1.6%	13.0%	21.1%	41.5%	22.8%	100%		
Lack of specialized staff for environmental practice	Preferred	5.0%		35.0%	30.0%	30.0%	100%	19.412	.495
	One star		7.7%	38.5%	38.5%	15.4%	100%		
	Two star		3.6%	28.6%	42.9%	25.0%	100%		
	Three star	3.0%	18.2%	18.2%	33.3%	27.3%	100%		
	Four star	5.0%	20.0%	25.0%	25.0%	25.0%	100%		
	Five star	11.1%	33.3%	33.3%	11.1%	11.1%	100%		
Total		3.3%	12.2%	27.6%	32.5%	24.4%	100%		
Lack of government assistance	Preferred			25.0%	25.0%	50.0%	100%	28.679	.094
	One star		15.4%	15.4%	38.5%	30.8%	100%		
	Two star	7.1%	3.6%	10.7%	50.0%	28.6%	100%		
	Three star		9.1%	9.1%	42.4%	39.4%	100%		
	Four star		15.0%	25.0%	20.0%	40.0%	100%		
	Five star		33.3%	33.3%	11.1%	22.2%	100%		
Total		1.6%	9.8%	17.1%	35.0%	36.6%	100%		
Lack of government regulation	Preferred	5.0%		15.0%	45.0%	35.0%	100%	21.221	.384
	One star		15.4%	7.7%	46.2%	30.8%	100%		
	Two star	7.1%	3.6%	14.3%	35.7%	39.3%	100%		
	Three star		15.2%	18.2%	33.3%	33.3%	100%		
	Four star		20.0%	30.0%	25.0%	25.0%	100%		
	Five star		22.2%	44.4%	22.2%	11.1%	100%		
Total		2.4%	11.4%	19.5%	35.0%	31.7%	100%		

Source: Own survey data (April-May, 2019)

According to Table 4 13, except lack of support from owners, all barriers of environmental practice variables have no significant association with hotel categories ($P > .005$). On the other hand, various environmental practices barriers have no significant different impact among different hotel categories.

Particularly, expense associated with environmental practices, lack of formal policy in hotel for environmental practices insufficient physical infrastructure, lack of government regulation, lack of government assistance, lack of specialized staff for environmental practice and lack of promotion of environmental practice have no significant difference among preferred, one star, two-star, three-star, four-star and five star hotels.

The cross-tabulation of hotel category and the environmental practices barriers indicates that majority of respondents of the all hotel categories affirmed barriers such as the lack of formal policy in hotel for environmental practices insufficient physical infrastructure, lack of government regulation, lack of government assistance, lack of specialized staff for environmental practice and lack of promotion affect environmental practice in all hotel categories relatively in similar way with slight or insignificant difference.

However, there is a slightly significant association between lack of owners support on environmental practice among different categories ($P = .005$). This test indicates that being in different hotel categories or rank level has a significant impact on a hotel's environmental practice. The cross-tabulation of hotel category and lack of support from owners indicates that there is slight betterment in high level ranked hotels precisely three stars, four-star and five-star hotels concerning the barrier of lack of owner support on environmental practice. On the other hand, low level ranked hotels bear this barrier more than the high ranked level hotels do.

The following table summarizes the key correlation data between the environmentally sustainable practices barriers within hotels and hotel ownership type.

Table 4: 14 Association of Environmental Practices' Barriers and Hotel ownership Type

Barriers	Hotels' ownership	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total	X ²	P
Expense associated with environmental practices	Independent	2.6%	11.1%	23.1%	41.0%	22.2%	100%	8.309	.081
	Franchise		50.0%	16.7%	33.3%		100%		
Lack of formal policy in hotel	Independent	2.6%	12.0%	24.8%	42.7%	17.9%	100%	15.630	.004
	Franchise		66.7%	33.3%			100%		
Lack of owners support	Independent		2.6%	23.9%	44.4%	29.1%	100%	50.444	.000
	Franchise	16.7%	50.0%	33.3%			100%		
Insufficient physical infrastructure	Independent	6.0%	13.7%	17.1%	41.0%	22.2%	100%	6.165	.187
	Franchise		50.0%	16.7%	16.7%	16.7%	100%		
Lack of promotion Total	Independent		11.1%	21.4%	43.6%	23.9%	100%	49.746 ^a	.000
	Franchise	33.3%	50.0%	16.7%			100%		
	Total		1.6%	13.0%	21.1%	41.5%	22.8%		
Lack of specialized staff	Independent	2.6%	10.3%	27.4%	34.2%	25.6%	100%	14.546	.006
	Franchise	16.7%	50.0%	33.3%			100%		
Lack of government assistance	Independent	1.7%	6.8%	17.1%	36.8%	37.6%	100%	23.933	.000
	Franchise		66.7%	16.7%		16.7%	100%		
Lack of government regulation	Independent	2.6%	10.3%	17.9%	35.9%	33.3%	100%	8.433	.077
	Franchise		33.3%	50.0%	16.7%		100%		

Source: Own survey data (April-May, 2019)

Table 4.14, Crosstab reflects that expense associated with environmental practices, insufficient physical infrastructure, lack of specialized staff for environmental practice and lack of government regulation has no significant association with different hotels' ownership type ($P > .005$). It indicates that all hotel categories experience relatively the same level of these barriers to environmental practices regardless of their hotel ownership type.

On the other hand, lack of policy in a hotel for environmental practices, lack of support from owners, lack of promotion and lack of government assistance have a significant association with different ownership type ($P < .005$). It shows that lack of policy in the hotel for environmental practices, lack of support from owners and lack of government assistance have a different impact in hotels of different ownership type which are either independent or franchise.

CHAPTER FIVE

DISCUSSION OF FINDINGS

Introduction

This chapter presents the findings of the study and shall relate these major findings with the existing body of literature. The focus of this research is mainly to observe the application of environmentally friendly practices in hotels and to investigate the barriers and motivating factors of environmental sustainability practices within Addis Ababa hotel industry. These are the main investigation aim of this research. This chapter begins by presentation of the results, with focusing on answering the specific research questions:- (i) What are the current environmental sustainability practices in Addis Ababa hotels? (ii) What motivate Addis Ababa hotels to implement environmental practices?, and (iii) what are the barriers of environmental sustainability practices' implementation in Addis Ababa hotels? In the previous data presentation and analysis chapter, the quantitative data part was presented and described separately in detail as per the category of responses based on the five points Likert scale provided in the survey questionnaire. However, in this chapter, a similar category percentage distribution responses were summed together in order to make it convenient for presenting the findings.

5.1. Environmental Friendly Practices in Addis Ababa Hotel Industry

In order to make their operation environmental friendly, hotels commonly practice environmental management initiatives like buying sustainable materials, energy efficiency, and water conservation, liquid and solid waste management, and sustainable hotel site development (Kirk, 1998; Tzschentke, Kirk & Lynch, 2004; Bohdanowicz, 2005; Park, 2009; Kasim, 2007; Graci & Kuehnel, 2011; Shanti, 2016). Therefore these green practices are generally aimed at mitigating effects linked with energy and water usage, indoor air quality and waste generation (Jackson, 2010). In this research, the environmental practices' investigation mainly focuses on five groups (dimensions) of environmental sustainability indicators such as energy-saving practices, water-saving practices, waste management practices, green purchasing, and clean air and green building. Under these categories, various variables were analyzed to measure the available green practices.

5.1.1. Energy Saving Practices in Addis Ababa Hotel Industry

Energy-efficient practices are extremely important in hotel sector; even the practices of new facilities alone can achieve savings of 20% or more, due to the fact that among the operational costs those of energy utilities are the most controllable one (Natural Resources Canada, 2003). In line with this concept, six indicators are analyzed to see the energy-saving practices within Addis Ababa hotel sector.

The analysis of these energy efficiency indicators shows that the most widely practising energy-saving initiatives are the regular cleaning and maintenance of electric facilities with average mean of 3.97; the uses of energy-efficient electric bulbs with mean of 3.83; the installation of key card/sensor to turn on and off light with average mean of 3.73, and the installation of energy-efficient appliances with averaged mean of 3.63. The routine cleaning and repairing of electric facilities are practiced in 81.7% of the surveyed hotels. The second most common energy-saving practice is the installation of an energy-efficient bulb in hotel rooms and other parts. It is well-practised in about 74.8% hotels. While this finding has a similar positive status, it is lower than the finding of a study conducted within Mashhad hotels where more than 90% of hotels were using energy-saving light bulbs in their rooms (Aminian, 2012). This indicates that though the technology of light bulbs are getting advances with time period increments, Addis Ababa hotels are yet not performing equally with time and technology advancements. In concurrent with these findings, within Sharm-Elsheikh city hotels, the using of energy-efficient lamps ranked first among energy conservation practices (Elbana et al., 2011). In Addis Ababa, though it recently it becomes common, the using of energy-efficient bulbs are more practiced in franchised hotels than the locally independent hotels.

Next, the third most performed energy-saving initiative is the using of key cards/sensor to turn power on and off lights, where it was practiced in 72.4% of available hotels. The fourth one is an installation of energy-efficient appliances in hotels where more than sixty-eight per cent (68.3%) of surveyed hotels used energy-efficient appliances in their operation. Though there is a time variation, this finding is greater than the performances of Mashhad city hotels which about 60% of sampled

hotels apply energy-saver control system in their guest rooms Aminian (2012). Mungai et al., (2013) reported that 50.8% Mombasa, Kenya hotels use of energy-efficient equipment and lighting. The finding indicates that Addis Ababa hotels are moderately implementing energy-efficient appliances.

In the surveyed hotels, among the analyzed energy-saving practices, the implementation of alternative sources of renewable energy and installation of a central water heating system is poorly implemented within the Addis Ababa hotel sector. This study reveals that only 27.6% of hotels installed the central boiling system for their guest rooms, and the rest hotels are using a single unit of the boiling system per their guest room. While using central boiling system highly reduces the energy consumption, the single increases the consumption of energy. Concerning the implementations of the alternative renewable energy program, only very limited hotels (4%) were used a renewable energy system. It implies these hotels are poorly implementing renewable energy practice program. It is possible to understand that nearly all hotels are totally relying on hydroelectric power and other non-renewable energy for their internal operation at all. This is also confirmed in the Sharm-Elsheikh city hotels, where the implementations of alternative renewable energy sources are least practiced (Elbana et al., 2011). Aminian (2012) mentioned that using solar, wind, biomass, and nuclear sources of energy are not common in Mashhad. This finding makes Mashhad and Addis Ababa hotels similar on practices of using renewable energy. However, the difference is the price of electricity is low in Iran (Aminian, 2012), whereas the price of electric power is currently high in Addis Ababa.

In addition to that, electric power is a scarce resource in Addis Ababa and there the provision of poor service in the sector. To overcome these challenges and to supplement the city's electric scarcity hotels were using the diesel generator. Using of the generator as an alternative power in Addis Ababa hotel is concurs with Zengeni, et al., (2013)'s assertion that 90% of hotels in Zimbabwe relied on the generator as their alternative for energy and in some cases would have no option but leave their duties and resume when electricity is back. However, in other ways, using non-renewable energy like diesel generator highly affects the clean air, and it is an unsustainable form of energy using.

5.1.2. Water Saving Practices in Addis Ababa Hotel Industry

In the hotel sector, water is used extensively for different purposes such as kitchen, drinking, laundry, guest bathrooms and flow for space heating (Fukey & Issac, 2014). As the hoteliers are aware of using water conservation system, different water conservation practices have been developed and implemented in hotels (Park et al., 2014). Within this base, in this study, the researcher analysed various water-saving indicators and ranked based on their mean score as follows: The installation of low flow or dual flush toilet ranked first. The timely maintenance of water equipment; installation of low flow water technologies; and the employing of water-efficient laundry machine ranked second, third and fourth next to the installation of the low flow toilet flush. About 82.9% of hotels installed low flow /dual flush toilet in order to save water. This analysis indicates water saving in the toilet is well-practised in the hotel. Bohdanowicz (2006) noted that the installing low flow faucets, showerheads as well as low water volume toilets are one of the most efficient water-saving measures as they can be implemented through a relatively low level of modification and cost. Next to that, the majority of Addis Ababa hotels' practised the regular maintenance of water equipment widely. More than seventy-one percent (71.5%) of hotels said they practiced the regular maintenance of water equipment. The detection and repair of water equipment in guest rooms and other hotel premise helps to conserve water (Hsieh, 2012). As this study reveals water equipment maintenance practices in Addis Ababa is characterized by moderately good performance; that has been playing a role in the water-saving initiative.

The installation of low flow water technologies; and the employing of water-efficient laundry machine ranked the third and the fourth. This study reveals, with quality and capacity of water-saving devices like the showerheads, pipes, hand wash tap and kitchen taps, toilet flush, garden sprinkler etc. are well installed in about 69.2% hotels. However, still, significant numbers of hotels' (30.8%) water equipment are water inefficient. These results represent only water-efficient equipment installation practices are moderately practiced in hotels. The finding is similar to Mombasa hotels in which 65.1% of the hotel involved in the installation of water-efficient devices and equipment has been done to a very great extent (Mungai & Irungu, 2013). In contrast to these results, only 24% of Mashhad hotels use photocell taps which shows that hotels in the city were not involved in water efficiency programs (Aminian, 2012).

More than seventy percent of hotels (70.7%) already employed water-efficient laundry machine that serves for washing the guests and the guest rooms clothes. This shows as though hotels moderately practice the using of the water-saving laundry machine. Still, a significant number of hotel ignored it. In contrast to these results, the using of water-saving laundry equipment was the least implemented practices in Sharm-Elsheikh city hotels (Elbana et al., 2011). So, on these, comparatively, Addis Ababa hotels perform better.

The above water efficiency indicators description implies that in terms of using water-saving fixture technologies, Addis Ababa hotels are found at good performance status. The installation of modern water appliances and fixtures technology; and shortage of water supply were the main initiator of water-saving practices in the Addis Ababa hotels. The study also reveals whether hoteliers are aimed for water-saving or not, the technology purchased in order to furnish hotel itself has a contribution to water saving. In addition to the contribution of technology for water-saving practices, the serious water shortage in Addis Ababa plays a significant role in inefficient water use. So, hotels, households or other industries are forced to save water accordingly. So in Addis Ababa, water-saving is not an alternative; it is a must. With similar findings, in India, the study of Manaktola and Juahari (2007) reported that water shortage initiates voluntary practices and environmental concerns.

The practices of roof water catchment or rainwater harvesting technology implementation does not exist within Addis Ababa hotels at all. In contrast to these findings of 40.5% of Zimbabwean hotels said they have rainwater harvest scheme at their hotels (Mbasera et al.,2014). Though the practices of Zimbabwean hotels rainwater harvesting is not sufficient, the finding indicated that they have better environmental commitment than Addis Ababa Hotels. Rain harvesting technology helps hotels to have additional water sources and to be waste-free through using the water for activities like flush toilets (Allen, 2007, as cited in Mbasera et al., 2016). On the other side, the finding shows that Addis Ababa hotels do not use rainwater as an alternative water source, which can play a role in cost-saving. Also Addis Ababa hotels do have groundwater as an alternative source.

Another very important water-saving practice is the re-use of towel and linens in the guest room. This is commonly practiced in very few internationally franchised hotels; however, it is rarely practiced within the locally independent Addis Ababa hotels. In contrast to this findings, Mbasera et al., (2014) little bit advanced practices in Zimbabwean hotels where 52.4% of them said they encourage guests to re-use towels and bed linen more than once; and about 58.7% Mombasa hotels implemented linen and towel re-use program (Mungai et al.,2013). According to this result, the Addis Ababa hotels held the backward position on implementations of linen and towel re-use program. More than these, the re-using of water is also practiced only within few swimming pools that owned by very limited hotels. In another world greywater is commonly practiced for flushing toilet, cleaning purpose or garden watering. However, in the case of Addis Ababa hotel industry, the re-using of water for other than the swimming pool is not accustomed yet.

5.1.3. Waste Management Practices in Addis Ababa Hotel Industry

In Addis Ababa hotel industry, the most commonly implemented waste management measurement was placing bins, sorting solid waste and disposing of wastes properly. Whereas, the practices of waste reduction like donating or selling an unwanted property and using refillable dispensers were performed moderately.

About 88.6% of Addis Ababa hotels are adequate places dust/recycle bin across the hotel premises, including the guest rooms in order to keep the hotel clean and to simplify waste collection activity. The placing of dust bin practice is common across all hotels in Addis Ababa, except is coverage extent. Hotels are well practicing the dustbin placing in their premises. Opposite to this finding, providing recycling bins was the least practiced waste reeducation practices in the Sharm-Elsheikh city hotels (Elbana et al., 2011).

The sorting of solid wastes was properly implemented in 78.9% of Addis Ababa hotels. This is considered as good achievement of waste management practices Though not exactly the same figure with time, this finding is supported by the study conducted in Mashhad, Iran where more than 70% of hotels apply solid waste separation (Aminian, 2012); and Mbasera & Mutana (2014) revealed that about 69.9% Zimbabwean hotels separate labelled containers for solid waste such as

cardboard, plastic, glass, metals and food waste. And 82.9% said they dispose properly of the sorted wastes. On these, it is confirmed that hotels are working with certain private companies and government offices on disposing of the solid wastes. Though there are challenges disposing of wastes timely and poor quality of sorting, this percentage achievement shows it is fairly good proper waste disposal practices in hotels.

The donation or selling of unwanted property/materials was well practiced in 68.3% hotels, and the rest 31.7% hotels were not implementing it properly. According to Bohdanowicz & Zientara (2008), the donation is one dimension to corporate social responsibility that makes efforts to support local communities and to promote environmental sustainability. This percentage shows donating or selling off unwanted property practices is fairly good, but it is still below expected while comparing the Ethiopians culture toward donation and property sharing. This indicates that there is a reuse practice in support of charity organisation and employees. The study shows that these hotels sell or donates reusable materials accordingly. According to certain stakeholders, these practices are adapted in hotels because of government requests, charity organisation requests and due to inherent Ethiopian culture of supporting poor. On this base, the study indicated that they donate old furniture, clothes, towels, linens and other materials for various government schools and different charity organizations in the city. In addition to this donation, some hotels also sell reusable properties on bidding. The study finding concurs with the study of Mbasera & Mutana (2014), where 76.2% Zimbabwean hotels donate reusable items such as furniture and linen to charities or employees; while however 23.8% them did not donate reusable these materials to charities or employees.

The installation of refillable soap, lotion and shampoo dispensers was performed in more than half of hotels (51.2%). So on this practice, Addis Ababa hotel is performing averagely. A similar finding, conducted in Zimbabwe, the majority of hotels (69%) said they purchase refillable soap, shampoos and dishwashing liquid to reduce disposable containers (Mbasera et al., 2014). In another study, the dispensers for shampoo and conditioner in guest rooms were the least practiced waste management practices in the Sharm-Elsheikh city hotels (Elbana et al., 2011). This finding indicates that hotels are moderately practicing on waste prevention through using dispensers instead of individual small bottles.

More than seventy-six (76.4%) hotels did not work on the reduction of paper waste. This implies that still, Addis Ababa hotels are highly depending on papers for internal office works as well as for different promotional activities. This implies that still, Addis Ababa hotels are highly depending on papers for internal office works as well as for different promotional activities.

It is also noticed that the waste management practice like reuse and recycle material, composting of eco-friendly wastes, and the treatment of wastewater are not being implemented in the Addis Ababa hotels. The finding of this study on recycling program is the same as those that were attained in Harare, Zimbabwe with no recycling (0%) practice at all (Zengeni, et al., 2013), and Ghanaian hotels which only few adopting recycling programs with only 17 percent of sampled hotels (Mensah, 2006). Concerning the composting of eco-friendly wastes the Addis Ababa hotels lack practice, this also similar with the findings of Zengeni et al., (2013), in which about 75% of Harare hotels simply dump the wastes. In addition, these findings, Aminian (2012) investigated that only 25% of surveyed hotels are composting the organic and food waste in Mashhad city. In contrast to these findings, the study confirmed that having a recycling program were the second most implemented waste management practices among the hotels of Sharm-Elsheikh city, in Egypt (Elbana et al., 2011). Despite there is a huge time gap between this study and the aforementioned studies' findings, it is possible to conclude the level of economic development has an impact on the level of adoption of environmental practices

Hotels reuse very few materials, but that is not that much significant contribution to the waste reduction. The analysis of Zimbabwean hotels' waste management shows that 61.9% of hotels do not put waste into further use; simply, they sent it to landfill (Mbasera et al., 2014).

At the same time, there are no practices of recycling and wastewater experiences at all. In contrast to the Addis Ababa hotels' implementation, the Mashhad city, 40% of hotels applied the wastewater treatment system. Addis Ababa hotels are not practicing wastewater treatment; rather they simply release it to the municipality sewerage system or discharge it using vacuum trunks-the unsafe sewerage disposal way. This is being considered as unsafe for the environment.

5.1.4. Clean Air and Green Building Design

In order to measure the initiatives of hotels to create clean air, three common practices were analysed in this study; having a smoke free policy, green building design and planting trees in or surrounding to the hotel premises. About 76.6% of hotels have to smoke-free policy throughout the hotel property, which indicates a good contribution to the green environment. This study indicates that there are smoke-free policies or separated room for smoking throughout the majority of Addis Ababa hotels. However, stakeholder claims that the main initiative intended to attract non-smoker customers. Mbaseraet et al., (2016) Claim that the creation of separate room for smokers enables to avoid exposure to involuntary second-hand smoke. If really hotels are motivated to create clean air; they would not use non-renewable energy sources like fuel consuming generators.

According to the findings, opposite to smoke-free policy, the majority of hotels lacks gardening and green design practices. As Addis Ababa hotels are downtown hotels, they suffer from lack of sufficient lands for garden and greening works. Most of them are built near main roads without good design and proper place selection on a small plot of lands which is even not sufficient for car parking. This finding is supported by the research of Aminian (2012). This author finds out that most of the hotels in Mashhad have no open/green spaces due to the high price of the land in municipalities. The lack of space can also hinder other sustainability practices as well, for example, the lack of space-constrained the hotels' efforts to develop the wastewater recycling system (Mahachi, Mokgalo, & Pansiri, 2015). Besides these, the lack of environmental policy also affects being free from creating smoke-free hotels. As a result, the practices of gardening with Addis Ababa hotel are poor.

The buildings' design of major hotels (90%) were not considered environmental sustainability issues. The rest, including few franchised and newly built independent Addis Ababa hotels, somewhat considers environmental issues. The Addis Ababa hotels buildings design were actually affected environmental practices like savings of water, saving of energy, waste management, visual appearance, and creation of cleaning the air in one or another way. This is due to the lack of attention from both government and hotel owners during the hotel business and its building design. Furthermore, as the concept of greening in the hotel is new, it was not considered in aged hotel

buildings. For the majority of hotels, even the location of hotel buildings and environmental impact assessment (EIA) were not considered during the design stage. The research of (Mbasera et al., 2017) reveals that the old hotel buildings are incompatible with new needs of green tourists.

5.1.5. Green Purchase Practices in Addis Ababa Hotels

The study revealed that three common green buying practices as follows. The first and commonly practiced among Addis Ababa hotels were the purchasing of local products. The analysis shows that about 93.5 % of hotel supply depends on local sources for consumable goods. These are mainly concerned with locally sourced food and drink-related indicators such as fresh fruits, vegetables, meat and some alcoholic and non-alcoholic drinks. According to Mbasera (2016), hotels are expected to purchase locally produced food and drink items as it is naturally fresh, indigenous and represents the area; it also plays a great role in reducing the economic leakages and supporting the local economy. So that Addis Ababa hotels performed very well on the initiative of purchasing local products. However, at a certain level, the consumption supplies of Addis Ababa hotels are covered by importing from overseas due to the shortage or lack of some supplies from the local market.

Another indicator analysed in this study is the green purchasing is buying eco-friendly products. According to Timothy & Teye (2009), one of the green purchasing element in the hotel is the buying of eco-friendly products such as food items, cleaning materials and other items made for guest houses or hotel operations. About 79.6% of Addis Ababa hotel depends on eco-friendly products. This implies that Addis Ababa hotels perform purchasing of eco-friendly products and materials initiative at a level that can be recognized at good. The similar finding, Aminian (2012), confirmed that about 87% of Mashhad hotels are purchasing environmental friendly materials for their operations. Despite the answer of Addis Ababa hotels' are positive, there are some arguments because of certain locally produced consumable products such as cleaning chemicals may be labelled as eco- friendly, but it is very difficult to be sure whether the products are really eco-friendly or not. In addition to that, food and drink materials are not free of in organic fertilizers. Furthermore, Addis Ababa hotels are accustomed to use environmentally unfriendly materials like plastic products. Therefore the finding is refuted by the stakeholders' responses.

The last green purchasing practices indicator is avoiding excess purchase package. About two-thirds of surveyed hotels (63.4%) agreed that they were not accustomed to purchasing any excess products and 30.9% of the hotel responded that they were buying excess packages for their service operation to save in stock.

5.2. Motivations for Environmental Sustainability Practices in Hotels

The finding of these study shows hotel operational cost-saving (mean=4.42); attracting customers (mean=4.07), and improving quality of service (mean=4.06) are the top three ranked motivators to practice environmental management in Addis Ababa hotels. In addition to these, the study also reflects the desire for improving the image of the hotel (mean=3.94); achieving award and recognition(mean=3.93), and the current technological advancement influence on environmental sustainability practices (mean=3.71) was considered as the moderately motivating factors those influencing environmental management at Addis Ababa hotels. Most of the hotels operated in Addis Ababa are highly business-oriented, and all their measurement and decision is influenced by cost-saving and marketing-oriented issues. The motivation arose from improving relationships with the local community (mean=2.6); environmental protection (mean=2.55); government incentives (mean=2.42) and stakeholders pressure (mean=2.23) are considered to have the least influence in environmental management practices

Among the research participant hotels, about 94.31% of them strongly agreed/agreed that they involved in certain environmental sustainability practices derived by operational cost saving. The Addis Ababa hotels focus on profit-making and to save costs from hotel operations. For these purposes, they invest in environmental management factors. Similar findings were made in other studies. In a study of United Kingdom hotel environmental policies, Kirk (1995) affirmed that hotels were mainly involved in environmental practices motivated by financial rewards. The study of Elbana et al., (2011) conducted in Egypt also identified that financial reasons as the main drivers of environmental practices among the hotels of Sharm-Elsheikh city. Similarly, the study of Mbasera et al. (2016) reveals that green initiatives have been implemented in the hotels mainly to save resources and for cost reduction. This also supported by the findings of Mahachi et al., (2015), the perceived financial benefit with other factors contributed to the hotels greening. In this study,

hotels also said that the cost of technology of environmental practices is considered a barrier to environmental initiatives. The finding implies factors related to cost-saving and profit-making are most influential motivator within Addis Ababa hotels.

The second most influential factor is the customer attraction, which 86.99% of Addis Ababa hotels agreed/strongly agreed customer attraction motivated them to implement environmental practices. The study reveals that the procedure and technologies implemented to attract customers contributed to environmental practices. According to the study of Elbana et al., (2011), though customer attraction was among the most influential factors, it was ranked on fourth places next to cost-saving, image enhancements and regulations. Other similar studies revealed the contrary findings to this study. Yim King Penny (2007) discovered that the Macao, China hotel managers *disagreed* that environmental management performance increased customer loyalty. Furthermore, according to Kasim (cited in Sucheran, 2013), the majority of Kuala Lumpur hotel managers of indicated that energy and water savings would not attract customers; as they do not appreciate the practice.

In this study, the third main motivator factor is the desire to improve the quality of services; that 80.49% responded that they are applied environmental protection intended to improve service quality in their hotel. In order to provide quality services and keep the hotel premise attractive, these day hoteliers invest a lot on technologies that contribute to environmental management. These data imply hotels participate in environmental management in order to attract customers. With a similar study but low percentage support; Sucheran (2013) reported that half of the sampled hotels and lodges stated that they practice environmental management to improve service quality.

Further, the fourth & fifth motivator factors are to achieve award and recognition which was supported by the agreement of 78.86% hotels; and hotel image enhancement, which 70.73% hotel managers said that they were implements environmental sustainability practices to increase their image in the market. According to stakeholders, hotels are applied certain practices to achieve star award from government and certificates from different organizations. In addition, to keep up their image hotels invests on various technologies and neatness of their environment. In a similar analysis, the image improvement factor was the second most motivating factor of environmental practices in Sharm-Elsheikh region, Egypt (Elbana et al., 2011). The comparative result was

reported in the study of Sucheran (2013), in which 92% of South Africa hotel managers said they were motivated to practice environmental management in order to improve the image of hotels and lodges.

Another motivator is a modern technologies influence. 67.5% managers said the reason hotels implement environmental sustainability practices is due to the influence of modern technology. This analysis implies as hotels are competing for the business, they introduce certain new working procedures and technologies which enable them to implement certain environmental practices. This study finding is consistent with the findings of Mahachi, Mokgalo, & Pansiri (2015) in Botswana. According to Mahachi al., (2015), the availability of technology with other factors contributed to the hotels greening in their energy supply.

Certain commonly known environmental management motivating factors like strive to achieve improvement of relations with the local community; to improve environmental protection; the government incentives and stakeholders' pressure were no more considered as main motivational factors in Addis Ababa hotels. The Addis Ababa hotels are being involved in certain environmental management without having a tough commitment to the environment. However, this is not a new finding. As an example, the study of (Mbasera et al., 2016) conducted in South Africa reveals that most hotels didn't have green management policies, but yet green initiatives were being implemented in the hotels mainly to save resources and for cost reduction. However, this finding is not consistent with the study of Ustad (2010). According to this author, the first and the most important motivations of environmental practices of New Zealand hotel is conserve the environment and save natural resources. As it is mentioned in the previous part of this study, Addis Ababa hotels do great emphasis on business and profit-making part rather than focusing on environmental issues.

Similar to Addis Ababa hotels, the New Zealand hotels did not consider the government incentives as motivations for environmental practices (Ustad, 2010). In contrast to these findings, in other parts of the world, the government incentives and grants motives hotels for environmental practices. For example, the study of Chan et al., (2006) conducted in Hong Kong revealed that the resources and supports provided by the Chinese government become the primary reasons for hotel managers

to implement EMS. In the case of Addis Ababa hotels, the government lacks both enforcement regulations and incentives provision rules towards hotel environmental practices. Majority of the most influential motivating factors are the internal ones; i.e. hotel operational cost saving, attracting customers, improving quality of service, achieving award & recognition and improve the image of the hotel. Whereas, the external hotel factors such as government incentives and pressure from stakeholder are the least influential motivations.

The environmental practices motivators such as improve quality of service, technologies influences, achieve award and recognition, improve the image of the hotel, attract customers have a significant association with different hotel categories (in star). Furthermore, the technologies influences, to achieve award and recognition, improve the image of the hotel, and attract customers, environmental protection/conservation and stakeholders' pressure have a significant association with hotel ownership type.

5.3. Barriers to Environmental Sustainability Practices in Addis Ababa Hotels

Many barriers are challenging the environmental sustainably practices within Addis Ababa hotels. These barriers are analyzed under internal and external categories. The internal barriers are ranked based on the responses of hotel managers as lack of support from owners (Mean=3.91); lack of formal policy in the hotel for environmental practices (Mean=3.78); expense associated with environmental practices (Mean=3.65) and lack of specialized staff for environmental practice (Mean=3.63). The external barriers are also ranked as the lack of government assistance (Mean=3.95); lack of government regulation (Mean=3.8.2); lack of promotion of environmental practice (Mean=3.71); and insufficient physical infrastructure (Mean=3.57).

The internal environmental practice barriers are related to factors within the business (Kasim (2009), cited in Sucheran, 2018). Among the internal barriers, the lack of support from hotel business owners takes the first places with the highest percentages (73.2%) of hotels response agreement. Addis Ababa hotel business investors are not supporting their hotels to invest in environmental issues due to either lack of environmental awareness or lack of environmental concern or both. A research carried out by Tzschentke et al., (2008) in Scotland, Britain reveals that

limited awareness amongst hospitality business owners of their adverse environmental has consistently been identified as a barrier to change. The Addis Ababa hotel business owners are highly focused on short term business profit. Leslie (2007), confirmed that the environmental management commitment of owners of accommodation is overshadowed by the more considerable attention they being paid to attaining maximum financial returns like through cost-saving.

The second key internal barrier is the lack of formal environmental policy in the hotel as a barrier, which is mentioned by 69.9% of surveyed hotels. Internationally franchise hotels and only a few locally owned hotels have a formal environmental policy. A similar finding is also revealed in Mbasera et al., (2016), where most hotels did not have any green management policies, but yet green initiatives have been implemented in the hotels pushed by other factors. While internationally franchised or chain hotel is obliged to follow the environmental policy with guidelines set out by the chain headquarters to promote environmental initiatives (Park et al.,2014), the locally independent Addis Ababa hotels do have only an established and certain regulations manuals for internal hotel operation. These hotel businesses oriented operational policies contain environmental practices elements such as procurement procedures, waste management, housekeeping management, smoke-free policy and selling of reusable materials; but it was not designed for environmental management purpose.

The majority (61.8%) of hotels confirm that technologies and other elements require for environmental sustainability practice needs a substantial financial expense. The study of Bohdanowicz (2006), Tzschentke *et al.*, (2008) and Sucheran (2018) documented similar findings that showed lack of financial expense as a critical challenge for environmental management. This study discovered, for example, the technologies required for water treatment, recycling machines, rainwater harvesting, land for the garden were the main challenge for hotels to afford due to its high investment expense. In addition to that, the local hotel business owners are reluctant to invest in those infrastructures due to unsatisfactory hotel market demands, which make difficulties of paying back the investment costs shortly. Because, the financial resources of hotel business determine the extent of environmental management involvement; if there is little income coming in the environmental issue green issues tend to get little focus, whereas if business is good, these issues tend to get priority scale focus (Tzschentke et al., 2008). These findings are affirmed by the study of

Sucheran (2018) in KwaZulu- Natal, South Africa that states "A larger proportion of independent hotels cited "high costs" as a barrier to environmental management compared to chain hotels" (pp.1358-9).

Another critical internal challenge is the absence of specialized staff and allocated departments/structures responsible for environmental sustainability practices. Environmental experts play a role in provoking and guiding the environmental practices in the hotel. This is supported by 57% of hotels. Especially in local independent hotels, having environmental experts or special department is uncommon in Addis Ababa hotels. Comparable findings were made by Sucheran (2018) in KwaZulu- Natal, South Africa where 78.3% of hotels confirmed that the lack of specialized staff as critical barriers to environmental measures, and Chan (2008) discovers that the Hong Kong hotel managers lack environmental consultants to assist them to run environmental programs which affected the implementation of environmental practices in their hotels. Sucheran (2018), claims that the lack of specialized staff with environmental knowledge results in the poor environmental performance of the hotel. It is expected from hotel managers to work in environmental knowledge learning capabilities before the development of the environmental management system.

External barriers are environmental factors that a business cannot control (Murillo-Luna et al., 2011). Concerning the Addis Ababa hotels external environmental practices' barriers, about 71.6% of hotel managers say lack of government support is the significant challenge for their failures to practice environmental management in their hotels. The Ethiopian government lacks focus on hotel environmental issues; as a result, there is no enforcement or encouraging for the practice. Sucheran (2013) reported that 76.7% South African of sampled hotels considered lack of government assistance as a barrier to environmental practices. Leslie (2007) confirmed that there was a lack of support from the local authority on the environmental management of accommodations. In contrast to these, the study of hotels in Zimbabwe and South Africa shows the availability of much support from the local government in implementing green initiatives (Mbasera et al., 2017). According to crucial informant stakeholders, in case of Addis Ababa hotels, except certain regular supervision and follow up on typical business-like hotel service provision, the government has not conducted yet any support concerns environment program. However, to motivate the hotel business, the

government allows importing certain duty-free machines and equipment for new hotel business investors that can have certain contributions for environmental practice indirectly. But intentionally, this is not planned for motivating environmental friendly hotels.

Lack of government regulation on hotel industry environmental performance was considered as the second big external challenge by 66.7% of hotels participated in the research. Unlike other industries, those have a clear environmental policy such as agriculture and manufacturing, Ethiopian hotel sector lacks policy that guides or initiates the business to be environmentally friendly. Furthermore, there is complicated and uncoordinated procedure among the government bodies those licensing, supporting, supervising and following up the hotel business. These government agents' works with the hotel industry are very complex networks and unclear procedure that resulted in loose follow up of environmental issue in the hotel. This indicates that there is no single mandated government body that regulates the implementations of environmental practices in the hotel. Even EIA is not requested for the investment of the hotel business in Ethiopia. The study of Sucheran (2018) affirmed that the lack of environmental regulation and legislation was a critical barrier to environmental management by most hotel managers in South Africa.

The absence of necessary infrastructures those directly involves or those indirectly support the operation of environmental program practices was considered as a challenge in 61.8% hotels. The lack of physical infrastructure has been challenging the practices of environmental management. There is a shortage of sufficient required infrastructure such as road, water, sewerage system and other enabling requirements, for example, the glass, wood and plastic recycling centre. These technologies and physical infrastructure are very expensive for hotels to afford or to develop from scratch. If these were sufficiently provided, hotels could also be somehow supported and motivated to practice environmental management. This finding is consistent with the study of Ustad (2010), where the absence of modern technology the second most significant barrier for environmental sustainability practices in New Zealand hotels.

Another less influential hotels' external barrier for environmental sustainability implementation is the lack of promotion of the environmental program. Sixty-three percent (64.3%) of hotels participated in the survey say the lack of promotion on the environmental program is a considerable

challenge. The promotion of environmental management in the hotel is not considered yet by any government bodies or other stakeholders. A good hotel environmental management promotion can motivate government, hoteliers and other stakeholders to participate actively; in contrast, its absence can challenge the practice negatively.

Finally, correlation test in the study shows that there is an association between lack of support from owners and the types of hotel category. Similar test shows the availability of a significant association between certain barriers and hotel ownership type. These barriers are the lack of policy in a hotel for environmental practices, lack of support from owners, lack of promotion and lack of government assistance.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

This research is the first time that a study of this nature carried out on hotels in Addis Ababa in terms environmental sustainability. Addis Ababa hotels play a significant role in accommodating various travelers as Addis Ababa is the capital city and the location of many international organizations. However, in Addis Ababa, it is expected that the influences of a hotel on the environment are significant as hotels consume substantial natural resources and producing wastes. Therefore, this research explored the current environmental practices as well as environmental sustainability practices motivators and challenges in the contexts of Addis Ababa hotel sector. The research study applied a descriptive survey approach to investigate the findings.

The study results indicated that the environmental sustainability practices within the Addis Ababa hotel industry are at its infant stage. Despite it, sound environmental practices indicators were moderately achieved in the groups (dimensions) of energy saving, water saving, green purchase, and waste reduction performances. The achieved environmental practices within Addis Ababa hotels were not genuinely performed for environmental commitment. It was discovered that these environmental sustainability practices were implemented in hotels mainly derived from various reasons. Environmental practices were implemented primarily to facilitate the success of hotel business rather than a genuine commitment to the environment. The reasons for implementing environmental sustainability initiatives include saving resources and operational costs; to attract customers; to provide quality services; to get recognition from the government; to enhance the image of the hotel; and to fulfill basic amenities for internal hotel operations. The installation of modern technology also contributed to the practice of environmental management.

Commonly well known environmental practices motivators in other external worlds, such as environmental protection, government incentives, improving local community relationships, and the stakeholders' pressure were not considered as significant reasons for environmental practices among the Addis Ababa hotel industry.

Though encouraging performances were achieved derived by certain motivating factors, sufficient environmental management practices were not achieved yet due to various blockage factors. These barrier factors were seen under external and internal barriers. Among the hotels' internal barriers to environmental practice implementations, the prominent one is the lack of owners' interest to invest in environmental issues. The hotel owners and managers are more concerned with the short term interest derived from hotel business rather than long term benefits of environmental protection. The second most challenging was the lack of environmental policy in hotels. The shortage of financial resources and lack of environmental specialists are the third and fourth-ranked challenges. From the external challenges, the absence of government support and lack of environmental guiding government policy come at the foremost as a barrier for the majority of hotels. The lack of necessary infrastructure and the absence of environmental sustainability promotion are still very crucial external challenges for hotel environmental sustainability initiatives.

5.2. Recommendations

This study provides exploratory insight into what the Addis Ababa hotels are doing on environmental protection, primary environmental practice motivators, and the obstacles facing these environmental practices performances. The concern of the environment in the hotel is not only the issues of hotels. For the future further improvement of environmental protection practices in the Addis Ababa hotel industry, several recommendations were also provided for hotel managers, hotel owners, for government and hotel stakeholders. It is believed that this recommendation could guide the bodies mentioned above in the adaptation and implementation of environmental initiatives in the sector.

Hotel Managers

Hotels managers are expected to take responsibility for the integration of the environmental issue in the hotel system. For example:

- Hotel managers should take the initiative to develop appropriate internal formal environmental sustainability policies and plans for their hotels.
- The hotel manager should work to increase the environmental understanding level of hotel employees, customers, and hotel business owners. Besides these, it is expected from hotel managers to develop the required structures and human resources to enable the hotel system to work on environmental management.
- Working closely with government bodies and other stakeholders is expected from managers in order to activate and internalize environmental management in the hotel sector and;
- Managers should share experiences from other greener international hotels. So that hotels' environmental management practices can be implemented equally with other hotel operations.

Hotel Business Owners

If it is required to solve the problems related with poor environmental management, it is must that the hotel business owners should own the issues of environmental management in hotel.

- From the beginning, hotel owners should consider environmental issues as part of their business plan. This can be possible through considering environmental impact assessment, green building design; environmental management department (structure); physical infrastructures required environmental; and environmental practices policy during hotel business plan development.
- In addition to that, hotels, investors should initiate and work with the government and other stakeholders on issues of environmental practices in hotels.

Hotel Stakeholders

- Stakeholders like the bank, hotel association, and higher institutions should encourage hotels to participate in environmental management practices by taking the issues of the environment as one requirement in their cooperation. For example, banks can request the hotels' environmental policy with their business plan during hostel requests for loans for investment.
- Higher education can develop environmental certification schemes and train competitive experts to facilitate environmental management in hotels.
- Hotel associations can make environmental issues as one pre-requirement to join their membership, which can initiate hotels to practice environmental management to a certain extent.
- Local Media also can take motivations to create awareness of environmental practices for hotel managers, hotel owners, and government bodies.

Government

Finally, the intervention of the government is highly recommended to regulate and deregulate environmental sustainability management in the hotel industry. For instance:

- The government should provide policy or legislation that makes environmental management mandatory in hotels. This policy may contain the requirement of an environmental impact assessment document to give a hotel investment license, which is currently not in practice. The issues of green building design and gardening can be part of this policy.
- The government should incorporate the environmentally friendly practices into the Ethiopian tourism industry development policy. Furthermore, to facilitate its implementation, the government should develop specific and detail standards for environmental practices for the hotel industry.
- It also expected from the government to conduct various training and awareness creation movements for hotel owners, for media, for stakeholders, and the tourism industry as a whole. This recommendation can be achieved by working with media in order to promote

environmental protection issues in the hotel industry. It creates a positive image for environmental protection and encourages stakeholders to take part.

- The government should take the initiation to develop, produce, and importing physical infrastructure and facilities required for environmental practices such as rainwater harvesting equipment, material recycling centers; the equipment required for alternative renewable energy sources; eco-label equipment, energy, and water-saving equipment. The government also should encourage hotels and other private companies to invest in these infrastructures and facilities.
- The government should work to discourage importing environmentally unfriendly brand appliances and products; and encouraging environmentally friendly and eco-label products.
- The government should give incentives to facilitate the participation of hotels on green management and should reward those who are already in practice environmental management.
- Lastly, at the country level, experiences sharing concerning the practices of environmental management from other countries are recommended for government bodies.

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**ADDIS ABABA UNIVERSITY
COLLEGE OF DEVELOPMENTAL STUDIES
CENTER FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
TOURISM DEVELOPMENT AND MANAGEMENT PROGRAM**

Questionnaire to be filled by Hotel Managers

Dear Respondents,

My name is Lammi, I am a graduate student at Addis Ababa University College of Developmental Studies. Currently, I am conducting research on the title of **“Environmental Sustainability Practices: The Case of Addis Ababa, Ethiopia”** for the partial fulfillment of the requirements for the degree of Masters in Tourism Development and Management at Addis Ababa University.

Dear respondents, this survey questionnaire is prepared to assess the environmental sustainability in hotels from the view of top managers. The questionnaire have two parts: one about general information of managers and the second part is questionnaire related to environmental sustainability. Your genuine response for the questions is extremely important for the successful completion of this study. Therefore, you are kindly requested to take some minutes from your precious time and provide your responses to this survey questionnaire. The information that you provide in this questionnaire will be kept confidential and be used only for academic purpose. I would like to thank you in advance for your kind cooperation and your time.

If you have any question, I can be reached by the address below.

Lammi Dinsa Kumsa

Phone: 09 53 992 171 / 09 12 677 658

E-mail: lammidinsa@yahoo.com

QUESTIONNAIRE FOR THE MANAGERS OF STAR RATED HOTEL IN ADDIS ABABA

Part One: General Information

1.1. Please Choose and Tick (√) among the Given Alternatives

1. Sex: Male Female
2. Age: <20 years 30-39 50-59
20-29 40-49 Above 59
3. Education: High School Certificate Bachelors Degree
Vocational /Diploma Post Graduate Degree
4. What is your current position? _____
5. Hotel Category Preferable 2 Star 4 Star
1 Star 3 Star 5 Star
6. How long have you worked in the hospitality industry?
< 3 years 6-10 years Above 15 years
3-5 year 11-15 years
7. Please describe the type of ownership of your hotel.
Independent Hotel Franchised Hotel

Part Two: Survey of Managers' View towards Environmental Sustainability

2.1. Please indicate how often your hotel is evolved in each of the following sets of statements mentioned below to assess the current environmental sustainability practices in your hotel by marking (√) in the appropriate box.

Currently Our hotel (is)...		Never Practice at all	Very Rarely Practice	Rarely Practice	Frequently Practice	Very Frequently Practice
Energy Conservation Practices						
1	Uses energy-efficient bulbs. e.g. compact fluorescent light bulbs, LED lamps					
2	Using key cards or sensor that turn power to the room on and off					
3	Using energy-efficient appliances e.g. condensing water heaters, shower heads, dishwashers, refrigerators, coffee machines, laundry system, lift and other kitchen equipment					
4	Frequently clean and repair all electric facilities i.e. boilers, laundry machines, condensing water heaters, shower heads, dishwashers, refrigerators, coffee machines, kitchen equipment, lift and etc					
5	Using alternative renewable energy i.e. solar, biogas					
6	Using central water heating system such as timer switches and thermostatic radiator valves					
Water Conservation Practices						
7	Installed low-flow technologies i.e. taps in kitchen, bathroom, shower heads and hand wash taps					
8	Installed low-flush or dual-flush toilets					
9	Encouraging guests to re use a bed linen and towels					
10	Using water efficient laundry machine					
11	Recycle or re-use water i.e. water from toilet and swimming pool, laundry					
12	Implementing rainwater harvesting techniques					
13	Makes regular maintenance to prevent water leaking in toilet, shower, laundry, swimming pool and other water equipment					
Waste Management						
14	Reducing paper use by using electronic formats					
15	Replacing soap, lotion, shampoo and conditioner bottles by refillable amenity dispensers					
16	Donate or sale unwanted furniture, linens, blankets, towels,					

	toiletries, old uniforms to shelters and re-servable food to local non-profits					
17	Placing recycle/dust bins to encourage recycling					
18	Sorting the wastes such as paper products, bottles and cans, and food waste					
19	Re use materials like cans, bottles, paper, cardboard					
20	Disposing wastes eco friendly. i.e. oil, Lubricants Cans, Chemical Cans, Paint Cans.					
21	Have a waste-water treatment in place					
Clean air and Green Building Design						
22	Implements smoke-free policy throughout the property					
23	Have garden for clean air and aesthetic values					
24	Works on eco-friendliness of buildings (during design stage)					
Green Purchasing						
25	Purchases eco-friendly products and materials					
26	Purchases local products and materials					
27	Avoid excess package purchase i.e. appliances, newspapers, input for food & other materials					

2.2. The following sets of statements are proposed to identify the motivators of implementing environmental practices in your hotel. From your point of view, please indicate by marking (√) the extent to which you agree with the listed statements.

	In my hotel environmental water saving, energy saving, waste management and green purchasing practices has been motivated by:	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
28	Operational Cost Saving					
29	Improve Quality of Service					
30	Technologies Influences					
31	Achieve Award and Recognition					
32	Government Incentive					
33	Improve Image of the Hotel					
34	Attract Customers					
35	Environmental Protection/Conservation					
36	Pressure from Stakeholder					
37	Improve Relationship with Local Community					

2.3. The following sets of statements are proposed to identify the barriers of implementing environmental sustainability practices in your hotel. From your point of view, please indicate by marking (√) the extent to which you agree with the listed statements.

	In my hotel the implementations of Sustainability practices has been challenged by:	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
38	Expense associated with environmental practices					
39	Lack of policy in hotel for environmental practices					
40	Lack of support from owners					
41	Insufficient physical facility and infrastructure					
42	Lack of promotion of environmental practice					
43	Lack of specialized staff for environmental practice					
44	Lack of government assistance					
45	Lack of government regulation					

THANK YOU!



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CENTER FOR ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
DEPARTMENT OF TOURISM DEVELOPMENT AND MANAGEMENT PROGRAM

Interview Guide for Key Informants

Dear interviewee,

My name is Lammi, I am a graduate student at Addis Ababa University College of Developmental Studies. Currently, I am conducting research on the title of “Environmental Sustainability Practices: The Case of Addis Ababa, Ethiopia” for the partial fulfillment of the requirements for the degree of Masters in Tourism Development and Management at Addis Ababa University.

Dear Interviewee, this interview guide is prepared to assess the environmental sustainability in hotels from the perspective of the stakeholders. Your genuine response for the questions is extremely important for the successful completion of this study. Therefore, you are kindly requested to take some minutes from your precious time and provide your responses to this interview. The information that you provide in this interview will be kept confidential and be used only for academic purpose. I would like to thank you in advance for your kind cooperation and your time.

If you have any question, I can be reached by the address below.

Lammi Dinsa Kumsa

Phone: 09 53 992 171 / 09 12 677 658

E-mail: lammidinsa@yahoo.com

Part One: Background of Key Informant Interviewee

Name: _____

Position: _____

Name of Organization: _____

Education Level: _____

Educational background (field of study) _____

Part Two: Semi Structured Interview Guide

The following questions are mentioned to assess the environmental sustainability practices of hotels. Please provide detail information orally as much as you can.

1. How you describe the overall sustainability practices of Addis Ababa hotels?
 - Water Saving practices
 - Waste Management Practices
 - Energy Saving practices
 - Green Purchasing in Hotel
 - Clean air and green building design
2. If there, what do you perceive factors that can drive hotels to participate in environmental sustainability practices?
3. From your point of view, what are the main challenges of environmental sustainability practices in hotels?
4. Are there any initiative practices which motivate or enforce hotels to participate in sustainability practices from government or other concerned bodies?
5. Are there any comments you would like to provide regarding hotels' environmental sustainability practices?