

Attitudes of Resort Hotel Managers Toward Climate Change Adaptation and Mitigation Practices, Bishoftu, Ethiopia

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ABSTRACT: *This study explored the attitudes of hotel managers toward climate change adaptation and mitigation practices in resort hotels located in Bishoftu town, Ethiopia. Weak resource management in the area causes serious environmental problems. So sustainable way forward is needed for the destination in order to reduce environmental damage. Six resorts were selected out of twelve resort hotels in Bishoftu city by using the Systematic sampling method, and a total of fifty-six managers were taken for the study. The data analyzed came from self-administered questionnaires, site observation, and a short face-to-face interview with general managers. The results showed that 99% of hotel managers possess positive attitudes toward climate change adaptation and mitigation practices. But they did not show a high commitment to adopt all adaptation and mitigation practices in their hotel's actions and day-to-day operation. Key adoption influencing factors identified were: owners' commitment toward sustainability, the applicability of government rules and regulations, and incentives for good achievement. The findings also revealed that the attitudes of resort hotel managers toward climate change adaptation and mitigation practices more significantly influenced by their social factors, such as level of education and age in this study. The study demonstrated that in order to increase managers' commitment and hotels become green: Government led-education and training programs, green certification actions, and application of government environmental regulation are important.*

KEYWORDS: climate change, climate change adaptation and mitigation practices, Environmental attitude, Resort hotels

INTRODUCTION

Tourism, hospitality and Climate change

The weather averaged over a period of time is a climate, and effectively represents the conditions one would anticipate experiencing at a specific destination and time [1]. The Intergovernmental Panel on Climate Change [2] defines climate change is a natural process in which rainfall, temperature, wind and

other type of weather elements vary over long time. Descriptions of climate and related change are specific to a time and a location and are defined over various scales from the local to the global, and over varying degrees of time. Changes in climate are described by [2] in terms of climate variability in respect of the variations in the mean and other statistical variables like standard deviation and occurrence of extreme , in which the climate on all temporal and spatial scales beyond that of individual weather events. The physical impacts and science of climate change presents a number of significant challenges for tourism that related to its effects on destination competence, tourism business activities basic infrastructure and resources, generating regions, competitiveness and tourist flows and behaviors as well as adaptation and mitigation measures [3]. Climate change is an issue of public debate because of tourism is often associated with transport and with aviation in particular, tourism is often a focal point for discussions on climate change in general [2], [3]. . There is a growing awareness of tourism impacts and the tensions that may exist in attempting to balance economic development with social and environmental goals. [4], [1].

However, [1], [5], [7], Identified, tourism also has specific characteristics and peculiarities that demand its own mitigation and adaptation response. These include tourism's significant role in less developed countries. [6], [2], [8], as well as the role of climate, environment, risk and security in influencing tourist travel patterns.

The same as other economic sectors tourism & hospitality sector contributes to and is affected by climate change [9],[10] However, tourism is often regarded as being among the more vulnerable sectors because of its dependence on the natural environment as a factor in the attractiveness of destinations [7],[1] Tourism and hospitality industry contribute to climate change through emissions of greenhouse gases (GHGs), including in particular Carbon dioxide (CO₂), as well as methane (CH₄), nitrous oxides (NO_x), hydro fluorocarbons (HFCs), per fluorocarbons (PFCs) and Sulphur hexafluoride (SF₆) [1]. There are also various short-lived GHGs that are important in the context of aviation and transport [11]. Because tourism is not recognized within existing industrial classification schemes, estimating tourism-related emissions requires the integration of information on the range of components that comprise the tourism system. Tourism-related emissions include all domestic and international leisure and business travel, and have so far been calculated for three major subsectors: transport to and from the destination; accommodation; and activities at destinations [7].

Tourism transport, accommodation and activities are estimated by independent assessments conducted to contribute approximately 5% to global anthropogenic emissions of CO₂ in the year 2005 [7]. Most CO₂ emissions are associated with transport, with aviation accounting for 40% of tourism's overall carbon footprint, followed by car transport (32%) and accommodation (21%) Cruise ships are included in 'other transport' and, with an estimated 19.2 Mt CO₂, account for approximately 1.5% of global tourism emissions [7].

Climate change Adaptation and mitigation practices in resort hotels

According to [7] Study climate is a crucial resource for tourism and hospitality sector that significantly influence the industry similar to other economic sectors likes agriculture, for the reason that climate positively or negatively affects length and quality of tourism seasons and determine visitors' destination

choice and expenditure. So many tourism activities in tourism destinations are based on natural environment. It's known that climate affects a wide range of environmental resources that are key attractions for tourism. [10] Also state that climate also has a significant influence on environmental conditions that can affect tourists' mobility.

World tourism organization [10] stated that tourism and hospitality industry contributes an important role for achievement of the United Nations millennium development goals. This, however, demands that the sector have to be adapts to climate change and reduces its contribution to climate change through emissions of greenhouse gasses and the overall environmental footprint of tourism both aspects require an important change in the tourism product development system. The reference [10] also state that all societies and economic sectors will need to adapt to climate change and that adaptation is occurring in many economic sector including tourism and hospitality. Adaptation to climate change is the process of adjusting to current or expected change and its effects [10].

Adaptation can be pursued by societies, institutions, individuals, governments and can be motivated by economic, social or environmental drivers through many mechanisms, for example social activities, market activities, local or global interventions [12]. Adaptive capacity is the potential or ability of a community, regions or system, to the effects or impacts of climate change. Adaptive capacity needs strategies leads to effective capacity to adapt which reduce likelihood and the magnitude of harmful outcome from climate change [13]. Adaptive capacity also helps institutions and sectors to have some of an opportunities or benefits like long season of climate change [12].

The capacity to adapt to climate change is vary between the components of the tourism value chain i.e. tourists, tourism service suppliers, destination communities, tour operators' subsectors of the tourism industry relatively [14], [15]. Tourists have the greatest adaptive capacity than service providers which own fixed infrastructure at local destinations. Large tour operators, who do not own the infrastructure, are also in a better level to adapt climate change impacts for the reason that they can influence clients' travel choices without significant crisis.

The information requirements, policy changes and investments that are required for effective adaptation by tourism destinations require decades to implement in some cases, and so there is a need for rapid action for destinations predicted to be among those impacted by mid- century [7].

Mitigation is a limiting of climate change by reducing greenhouse gas emissions. it can be achieved by reducing energy use, for instance through increasing the use of renewable energy source, energy efficiency, Sustainable way of destination planning and management, tour operators choice of destination and packaging of tourism products and other carbon neutral business activities as well as practices Technological innovation has also considerable potential to achieve reductions in greenhouse gas emissions, this will, given the high growth rates in global tourism, not be sufficient to achieve absolute reductions in energy use and emissions[7]. Behavioral changes in tourists as well as overall structural shifts in hotel and tourism industry will thus be of importance in reversing the trend of growing greenhouse

gas emissions and to increase sector contribution to carbon neutrality.

Currently, some hotel companies with a proactive environmental commitment are implementing green practices in various operational areas, such as laundry, food and beverage service, guest rooms, housekeeping, Conference and meeting facilities. Some of the previous research has examined green practices conducted in each area of operations and categorized them into three main areas of environmentally friendly practices: energy management, waste management and water conservation [16] Energy management includes. Such as the use of solar power, installation of energy-efficient laundry equipment's, wind power, adoption of automated (computerized) energy control system, use of digital thermostats to control guestroom energy consumption, installation of occupancy sensors (which automatically turn the lights out when guests leave the room), reduction of air-circulating equipment through implementation of smoke-free policies, use of energy star-qualified products, installation of triple-glazed windows or reflective glass to save energy for heating and cooling, replacement of outdoor and exit signs with Light Emitting Diode (LED) signs and use of waste heat from the power generators[17] . In addition to those three main areas of environmentally friendly practices, Natural resource conservation and greening, purchasing activities, organization and system, and external relationship can also be included in decision areas and functions for environmental management in the hotel industry.

Energy efficiency and management

Hotels consume massive amount of energy.[18] stated that typical hotel energy expenses include money spent on electricity, gasoline and other fossil fuels, and water as well as the purchase of steam, hot water, and chilled water. Energy usage creates toxic pollutants such as CO₂. Environmental management is needed to reduce energy usage and pollution, the reduction of which will result in lower energy costs. [19] Explains that energy costs represent.

4-6% of hotels' revenue and that the annual cost of energy for the U.S. lodging industry is around 3.7 billion dollars. [20] demonstrates that the consumption of energy in the hotel industry can emit harmful gases into the air, leading to air pollution. He estimates to what extent the energy uses by hotels results in the release of environmentally harmful gases: between 160 and 200 kg of CO₂ per m² of hotel room floor, depending on the fuel that the hotel uses to generate electricity [16].

Many studies state that the consumption of energy differs between various geographical areas. [20] Found that electricity usage accounted for 73 percent of the operating cost of a Hong Kong hotel and 75 percent of the operating cost of a New Zealand hotel [21]. It can be seen that the hotel sector consumes a large amount of electricity when compared to other tourist industries, because hotels require 24-hour operation and need to use energy for their lighting and air-conditioning/heating systems [22]. It is important for the hotel sector to make a positive contribution to the environment and to reduce energy consumption; to do this; hotels can implement an energy saving means and as a whole develop system to bring green practice.

Water Consumption and efficiency

Hotels have to overcome shortage of water by adaptation measures. Among natural resource used in hotels water is very important and consumed more within one night. [13]. State that hotel consumes about 209

gallons of water per occupied room each day. It is almost similar to 243 gallons of water used by a typical USA household. With increasing awareness of cost saving opportunities through water conservation, various related programs have been developed and implemented among hotel companies. According to Marriott International's linen reuse program, encouraging guests to reuse lines and towels during their stay contributes to saving 11 to 17 percent on hot water.

Previous literature also reported that linen and towel reuse programs are well-established practices in hotels in most countries, with more than two-thirds of the respondents in studies conducted in different countries using such programs [17], [23]. This program saves not only hot water and energy, but also reduces the use of detergents, and thereby reduces wastewater. A 100-guest room property with 75 percent occupancy can save an estimated \$25,000 per year through a linen and towel reuse program. These savings are derived from an 81,000-gallon reduction in water consumption and 540-gallon reduction in detergent [14].

According many scholars [23], [24] the following activities are used as water conservation such as Placing water meters in guestrooms to track usage, Adopting water saving campaigns in kitchens (washing dishes when there are full loads or not using running water to wash vegetables ,Adopting water-efficient or xeric gardening techniques, Using treated wastewater in garden irrigation ,Using water-efficient devices (Low-flow or infrared-activated faucets, low-flow showerheads, low-water-volume toilet, sink aerators, and energy Star qualified cooking devices etc.) ,Instituting a linen reuse program. , Regularly fixing toilet leaks, Using water-efficient laundry equipment and dishwashers

Waste management

Waste management in hotels is not only affect environment but also their market. It has been designed and implemented to reduce the volume and toxicity of garbage [23] conducted a study to examine environmental practices implemented by Turkish hotels and found that paper and food waste are the greatest amount of waste generated sources of hotels. The food and beverage service area in particular generates various solid and organic wastes such as packaging and food waste, aluminum cans, glass bottles, corks and cooking oils. The housekeeping operation also generates cleaning materials and plastic packaging. In addition to solid waste from front-of-house areas, back-of-house areas also generate a huge amount of solid waste such as toner cartridges, paper and cardboard waste and many other wastes from the hotel facility maintenance department [25].

A reference [22] also state that waste generated by hotels does not only increase their operational costs but contribute to resource depletion. The difference in waste generation is also not only depending on size of the hotel but also the type of functions being held at the hotel and other events taking place at a particular time. it is also estimated that from over all wastage 46% food waste,25.3% paper,11.7% cardboard,6.7% plastics,5.6% glass and 4.5% of metal waste.

Conservation and Vegetation Cover

Without compromising the development of industry the tourism sector has a responsibility to minimize harmful emissions by encouraging and advocating for sustainable, carbon-neutral transport solutions and

low carbon market destination combinations, to improve the use of natural resources (water and energy) and to contribute to the conservation of natural areas. Conservation of existing natural forest and reforestation in resort campus contributes not only for attracting and staying visitors in resort but also crucial for the overall mitigation of climate change [26].

Wood also address climate change in several ways such as substituting wood for fossil fuel avoids the emissions from substituted products, forest carbon stored in the wood products; trees remove carbon dioxide (CO₂) from the atmosphere and store in their roots, stems, trunks, and leaves through the process of photosynthesis. Forest ecosystems also store carbon in soil forest floor and down dead food [26].

Environmental policy and regulation

Government policy and regulations with respect climate change has a significant effect on adaptation and mitigation efforts because of their influence on the regulatory environment that affects the decision making of business sector to engage with and respond to particular innervations. There are environmentally friendly forms and programs in tourism sector since 1980s such as ecotourism, green tourism or sustainable tourism that arguably encouraged governments to engage more in tourism related environmental regulation and policy [9] although public sector intervention for real practice of this programs still to low [9].

A policy instruments and measures are designed to mitigate and adapt to climate change impacts on the basis of sustainable development goals, have been proposed by researchers [1] and international tourism organizations [7], [27]. Nevertheless, the policy progress of international organizations with an interest in tourism as well as national governments with specific respect to tourism and climate change has been rather slow. Instead, greater success has been achieved in implementing more traditional environmental resource management strategies for more defined policy areas, e.g. water, energy and natural environment, as well as pollution, waste, and greening initiatives, that may also have benefits with respect to emissions reduction or adaptation.

Environmental education, Social benefits and responsibility

Local community is other important resource around resort destination, but most of the time social dimension has been given less attention than environmental issue in sustainable tourism debate. [9] Most of the early studies of the effects of tourism were restricted to economic analysis and enumerated the financial and employment benefits which accrued to destination areas as a result of the benefits of tourism. In recent years a number of studies have emerged that examine the socio-cultural impacts of tourism. In contrast to the economic effects, such impacts are usually portrayed in the literature in a negative light. The United Nations Environmental Program (UNEP) also refers to the host community as the weaker part in interactions with their guests and service providers, and describes the socio-cultural impacts of tourism as ‘the effects on host communities of direct and indirect relations with tourists, and of interaction with the tourism industry’. The impacts arise when tourism brings about changes in value systems and behavior and thereby threatens indigenous identity. Furthermore, changes often occur in community structure, family relationships, collective traditional life styles, ceremonies and morality’ [7].

The social impact of tourism as whole is difficult to measure and hard to identify because of its difficulty to understand and are often indirect. it is also invisible, intangible and occur slowly over time. However, once the social impact of tourism has been taken its impossible to reverse the situations again. [28]. On other hand, if sustainable way of tourism management practiced it can generate positive impacts such as supportive to peace, foster pride in cultural traditions and contribute to avoid urban relocation by creating local jobs [7].

It is important that any development of tourism should meet the needs of the host community and their right have to be respected. Any tourism industry planning and development must include strategies protection of resources in order to make tourist activity sustainable for future. The local community must be threatening as equals and must participate in any decision making process [28].

Environmental attitudes and management

Environmental attitudes have been defined as “the collection of beliefs, affect, and behavioral intentions a person holds regarding environmentally related activities or issues” [29]. Attitude toward the environment is used interchangeably with environmental concern which represents predispositions of human beings that influence behavior in a certain manner [30]. The object of most environmental attitude research has been the environment. The specific topics have been on attitudes and behavior consistency, construct of environmental attitude, and the relationship with other variables including demographic variables, experience, beliefs about control, efficiency, responsibility, and personal values. Personal values, in particular, have frequently been examined as a predictor of environmental behavior or mediator of the relationship between the environmental attitudes and behaviors. [29].

Previous studies have discussed the environmental attitude of hotel business in relation to issues of corporate responsibility, environmental policy, and green marketing. In addition to macro lodging facilities [31] , hotel respondents seemed to understand the negative impacts of their operation on environment[32], [33] but had a low willingness to undertake responsibility for their hotel’s actions [32], [33], [34]. A number of studies indicate that hotels expect government leadership via financial and educational support to enable environmental measures [35], [36], rather than legislative intervention [37]. In other research [38].Empirically examined a relationship between top management commitment and some external and internal forces and their impact on firms’ environment strategies in business sector. It found that top management commitment has a positive impact on both environment orientation and strategy.

Factors affecting adoption of climate change adaptation and mitigation strategies

Knowledge deficiency

There are a number of factors that influences hospitality industry to implement environmentally friendly practices in their organization. These factors are organizational and industry barriers .it can be distinguished as internal and external factors

Customer attitudes

Reference [39] point out that large number of hospitality organizations waiting guests increased demand and their lower operating cost before having commitment to implement green initiatives and formal environmental practices [40]. wonders if customers really care that hoteliers are making efforts to improve their environmental footprint through the introduction of green programs and whether or not it effects their hotel selection and the price they are willing to pay. The results of a survey carried out by [40]. Show that “eco-friendly or “green initiatives” were most compelling to luxury hotel guest who could afford to care about green practices, whereas these programs were least important to customers who look for economy brands. It is apparent that price is still the dominating factor when it comes to hotel selection and that many guest are not prepared to pay extra in order to support green initiatives.

Reference [41] believes that “many individual operators feel that they are too small to have any real effect, that these services are very price sensitive and that the customer would soon go elsewhere if asked to pay any of the cost of environmental management”.. [42] Also believes that even though there are a proportion of customers who are price-aware, the conscientious customer understands that sustainable products currently come at a premium and are willing to spend the money to ensure their own role in building a strong future. It is evident that the needs of a particular hotels guest have an impact on whether or not hotels implement green practices.

Owner/Manager Attitude

Hospitality managers still operate in old world ideology and do not truly accept or appreciate the need and value of the environment in relation to their business. Most of the time they see as add-on to their corporate policy, in fact it is important in terms of growth and profitability if they are meaningfully corporate. Many academics believe that one of the reasons for shallow integration of environmental issues in their plan is that some managers do not want to involve their owners in active and innovative work in order to carry out independently simple cost measures that do not require approval. In other hand there are several hospitality managers who recognize the impact their organization is having on the environment but restricted in implementing environmental practices unless there is a clear benefit such as cost saving attached.

Finance

Some researchers shown that hospitality managers have a perception that environmental improvement come at a cost and needs intensive capital projects. In contrary with [41] believes that environmental practices and polices does not always have to involve capital intensive projects; it can create low cost, simple projects that can be implemented by employees. Environmental management practices are often promoted as a cost-cutting opportunity but for many managers this is not a reality. [43] Believes that the pressure of implementing green practices has been centered around structures such as environmental auditing, impact assessment and accreditation, which has high certification fees attached, thus becomes a deterrent for many hotel mangers especially in times of financial difficulty.

Legislation and accreditation

Legislation and accreditation systems have their own role to influence hospitality business to implement and practice the green agenda. [44], [45], Shown that government policy and accreditation system have a significant effect in adaptation and mitigation efforts because of their influence on the regulatory environment that affects business decision making. [9] Also further state that tourism specific policies and general public policies have to be differentiated for the reason that many government organization lack both and regulatory capacity as well as structured policy network in which sectorial interests may be greater than that of the industry as a whole. in such condition.

Structure of the hotel and human resource

The structure of the hotels may have impact on implementing environmentally friendly activities. However, many hotels did not consider about green agenda during building design and construction. [46] believes that” there may have been a time when hoteliers faced a 10 or 15 percent cost premium for building a green building” [47] maintain that special positions within hotels need to be created in the area of environmental management in order for a property to be a true champion in this field, which in essence has implications with regard to additional labor costs for any property.

Resort hotels: - “Resorts are places that offer relaxation and recreation in addition to accommodation, meals and other basic amenities” [48].

Environmental attitude: -The collection of beliefs, affects and behavioral intentions a person holds regarding environmentally related activities or issues [49].

The following analytical framework is used to show the relationship between climate change adaptation and mitigation practices, attitude of resort hotel managers’ and influencing factors. Tourism activities are vulnerable to climate change and climate variability, which influences the overall activities and tourism out comes. Furthermore, the adaptive and mitigate capacities and experience in hospitality industry are crucial to minimize this impact. The outcome of mitigation activities can also influence the adaptive capacity or vulnerability of local destination to climate change. Internal and external factors like, Attitude of managers, government control, incentives and demand from guests can influence implementation of climate change adaptation and mitigation measures in resort hotels. According to this framework, to bring sustainable resort that contributes positively to climate change: energy efficiency, Waste management, water conservation, Social responsibility and environmental education activities are essential. So from literature review summary the following analytical frame work is proposed [50].

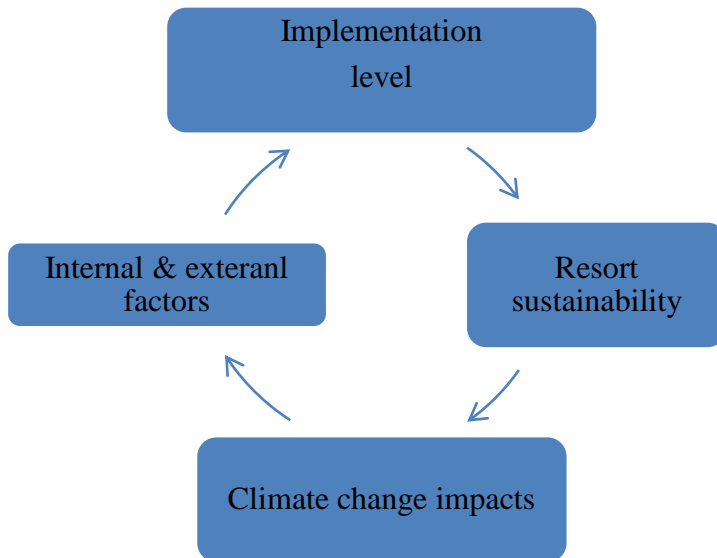


Figure-1 Theoretical model

General description of the study area

Topography and geographical location

Bishoftu is a land of seven lakes in it. That is why it was named Bishoftu in Afan Oromo, whose meaning is full of water. Bishoftu town is located in Oromia Region, East Shoa Zone at a distance of 47km from the capital city Finfinnee (Addis Ababa). The town is specifically located $8^{\circ} 43' - 8^{\circ} 45'$ North latitude and at $38^{\circ} 56' - 39^{\circ} 01'$ East longitude and at elevation of 1900-1995 meters above sea level. Ada district borders Bishoftu town in all directions and the town is a capital city of Ada and a home to the Ethiopian air force. The geographic coverage of the town is about 15,273 hectares in 2002 E.C. The major tourist attractions around Bishoftu town include Kuriftu, Babogaya, Bishoftu, Arsedi, Calalaka, Hadho and kilole lake, in addition to those lakes, there are Mount. Yerer and Cuqqaala which is another attraction in near distance.

Other unique cultural festival celebrates every year towards the end of September is Irecha which the Oromo people gather on the shore of the lake Hora Harsde where they conduct ritual ceremony (traditional thanks giving ceremony). This ceremony which millions of people attend is believed to be the oldest form of monotheism practiced in Africa. At this festival the people pray to god for the good will and wellbeing of their cattle and family, in the coming year. This day young Oromo are seen in their colorful traditional clothing, dancing and singing is worth visiting in the area [51].

Bishoftu is from the category of moderate temperature and received a total mean annual rainfall and temperature of 974mm and 18.60°C . The highest rainfall was recorded in the month of August (Bishoftu Agricultural Research Center Meteorological Data (1980-2010)). Geographical

Locations of the sampling sites are given in Table 1 with GIS map of the study area shown in figure 2 below

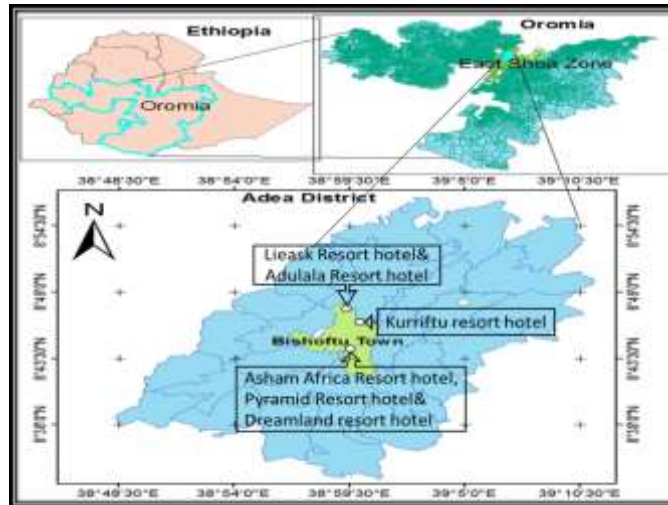


Figure 2: Map of Study area

Population and livelihoods

The 2007 national census reported a total population of 99,928 for Bishoftu, of which 47,860 were men and 52,068 were women. The majority (79.75%) of the inhabitants said they are followers of the Ethiopian Orthodox Christianity, while 13.82% of the population was Protestant, and 4.98% was Muslim. The three largest ethnic groups reported for this town were the Amhara (42.86%), Oromo (39.4%), and the Gurage (8.3%); all other ethnic groups made up 9.44% of the population. This indicated that the town is an area in which diverse groups live together in harmony and where active flow and mixture of cultural practices, and indigenous knowledge exists.

The people of the study area make their livelihoods on employment in government offices and private organizations, small scale businesses, service related trade (Hotel, Butcher), occupations that require skills like wood work, metal work, black-smith and urban agriculture (personal communication with the city administration).

Sampling techniques

Sample determination

There were twelve resort hotels in the Study area. So Six resorts were taken from total population by considering the degree of variability and response rate is not more than 20 % and 80%. Using sample size formula below [52].

$$n = \frac{\frac{p(1-p)}{Z^2} + \frac{P(1-p)}{N}}{K}$$

n= sample size required

N = number of people in the population

P = estimated variance in population, as a decimal: (0.5 for 50-50, 0.3 for 70-30, 0.2 for 80-20)

A = Precision desired, expressed as a decimal (i.e., 0.03, 0.05, 0.1 for 3%, 5%, 10%)

Z = based on confidence level: 1.96 for 95% confidence, 1.6449 for 90% and 2.5758 for 99%

R = Estimated Response rate, as a decimal

Methods of site selection

The study was conducted in Bishoftu town. Since it's an old tourism attraction area with so many resort hotels established around the lakes. This destination was selected purposively out of three resort destinations of Oromia called Langanu, Batu and Bishoftu. Because of the high intensity of utilization of the fragile ecosystems, which deserve to be assessed for the impact they may have on the sustainability of the natural resources that were serving as tourist attraction. Furthermore, its intended to study the suitability of attitudes and practices toward climate change adaptation and mitigation measures in the selected area because of the perception this resort destination had greater opportunity in terms of technology, awareness of the hotels owners, educated and skilled man power relative to other resort destinations. Systematic random sampling was used to select sample resorts

Methods of respondent Selection

The population of this study was composed of hotel managers or supervisors from various departments of resort hotels in Bishoftu town. All managers were purposively selected as sample group of study in sample resorts. The main reason for limiting the sample to hotel managers was that their positions have more influence on hotel performance. Attitudes of resort managers' influence actions; even though many hotels and hotel managers understand the negative impacts of their operation on environment but had a low willingness to undertake responsibility for their hotel's actions.

Methods of data collection and procedures

The main data type used in this study was primary data. Published and unpublished Secondary data like tourist guide, annual reports and strategic plans from regional and town level tourism office was also accessed. The primary data was collected with pre-test questionnaire survey, Interview and observations.

Survey instrument

The survey instrument was developed in a two -phase process. First, an in-depth literature review was conducted to develop initial lists of managers' attitudes and perceived barriers toward climate change mitigation and adaptation practices [16], [20], The first draft of the survey questionnaire was created at this stage. Second, the final questionnaire was created based on interviews with hotel managers in Bishoftu and The new edition of the questionnaire was further validated by the scholars and Advisors from Hawassa

University, Wondo Genet College of Forestry and Natural resources, based on feedback from advisors and scholars, the questionnaire was finalized. The questionnaire is divided into four parts. Part A contains general information's and demographic questions. Part B measures the respondents' attitudes towards climate change adaptations and mitigation practices in resort hotels Part C is designed to identify current adaptation and mitigation practices. Part D is comprised of statements about barriers to adoption of climate change adaption and mitigation practices

Interview and site observation

Interview was done with General Managers of six resorts. Lakes, garden and hotel sections observation was also carried based on checklists out to document the practices in place in order to triangulate the responses obtained through questionnaire survey and interview with general managers to check with realities on the ground. The observations and interviews were including environmental like pollution, waste management system, conservation activities of the hotels.

Data was collected from November through December 2017. Originally, human resources departments were asked for permission to submit survey packages to the hotels after orientation were given. After obtaining hotel permission, survey packages were submitted at the locations requested. The survey packages included a cover letter, a permission letter, and a survey questionnaire in a sealed envelope. The cover letter stated the survey was anonymous. This package was delivered to the human resources department of each hotel, and the human resources department distributed the questionnaire to other departments.

Each hotel had a week to complete the survey. Afterward, the author monitor survey questions together with human resources departments till finalized. Initially, 56 questionnaires were sent to 6 hotels. One- and two-week onsite follow-up and phone calls were made in order to remind the hotel managers to complete the survey, as well as to thank those who had already completed and returned the survey. the result was 44 completed questionnaires returned. This procedure resulted in 81.4 % response rate.

Data analysis

Simple descriptive statistics (Mean, percent, Average, frequencies) were used. Data was analyzed by using SPSS Software version 20 and the results would have presented in the form of tables

1. A frequency analysis was performed in order to describe the hotel mangers attitude towards climate change adaptation and mitigation practices, performance level of adaptation and mitigation practices as well as the most important factors influencing adoption of practices.
2. Simple regression analysis was used to explore whether hotel managers' attitudes were influenced by social and demographic characteristics.
3. Qualitative data was analyzed using listening and transcription

RESULTS AND DISCUSSIONS

Results of the study

General profile of managers and resorts

The majority of respondents were male (64%). Interestingly, more than half of hotel managers held Bachelor's degrees and above (68 %), near to half (43 %) have tourism specialization in both diploma and bachelor degree (Table – 1 in the Appendix)

Manager attitudes toward CC adaptation and mitigation practices

The result showed that the highest mean values on the scales expressed strong agreement with the beliefs that, hotel should support local conservation efforts (4.59), hotel has a responsibility to respond to the environmental impacts of tourism (4.57) and environmental management will increase the market value of the hotel (4.48). The participants with the lowest rankings showed disagreement with the statement that, it is not possible to be both profitable and environmentally friendly (M=2.02, SD=1.59) (table 2 in the Appendix)

Basic social-demographic characteristics influence managers' attitude

This study examined four social-demographic variables, namely: gender, age, level of education and manager's income. The regression analysis result showed there is a statistically significant difference in age and education; however, there was not a statistically significant difference in gender and level of income. The result showed that there was statistically significant agreement in nine out of 14 statements related to age. The respondents who were older than 35 were more likely to agree with all nine attributes than respondents who were younger than 35. These attributes were: hotel activities have a negative effect on the environment, hotel has a responsibility to respond to environmental impact of tourism, environmental management must be a part of the hotel operation, the management of my hotel believes that climate change exists, the government should regulate the tourism industry regarding climate change, all businesses have to be involved in fulfilling social obligations, hotel should support local conservation efforts, environmental management will increase the market value of the hotel, and environmental impact should be considered when deciding company policy.(table 3 in Appendix).

Climate Change adaptation and mitigation practices implemented in Bishoftu resorts

Twenty-six items were included in this study. Over all the study showed the results of the performance level regards to resort hotel managers' participation on those practices. The study also noted that practices that hotel resort managers view as the highest performed and the most widely used climate change adaptation and mitigation practice was reported as reusable items (3.57), implementing water efficient gardening program (3.14), Energy efficient appliances and uses high energy efficient lighting (3.02). The mean scores in the study also showed that least participation was seen in achieve environmental

certification (1.16), initiate a resort hotel environmental policy and setup targets (1.41) and alternative fuels and renewable energy (1.52) (Table-4.in the Appendix)

Factors influencing adoption of Climate change adaptation and mitigation practices in resorts

Table 5 below shows the frequency analysis of factors influencing adoption of climate change adaptation and mitigation practices. The results showed that participants with higher values on the scales expressed very important with attributes including: Owner or top manager's personal value and belief, government incentive for good achievement, and government policy and regulation. The participants with lower values showed attributes that are not very important are: time availability and the statement that, current information (Table-5 in appendix).

DISCUSSIONS

Managers attitudes toward climate change adaptation and mitigation practices

Over all 99% of the respondents in this study had a positive attitude toward hotels responsibility government intervention and support in regards to adoption of climate change adaptation and mitigation practice. Because majority of respondents (93 %) had diploma and above in tourism and related course that helps them to have awareness about climate change adaptation and mitigation practices. Even if positive attitudes towards climate change adaptation and mitigation practices and understand the negative impacts of their operation on environment, they did not show high commitment to apply all adaptation and mitigation measures in their hotel's actions and day to day operation. Because there were less concern from corporate level of resort hotel and responsible government sectors.

In another version resort manager expect attention from corporate level of hotels and government leadership via financial and educational support to adopt climate change adaptation and mitigation practices in their resort hotels. Sustainable environmental practices were not also a control system and an essential part of appraisal system of general managers from their hotels as a whole. So they will not have motivation or drive to implement environmental practices. Social demographic characteristics influenced hotel managers toward climate change adaptation and mitigation practices. Age and education are identified as, the most influencing factors whether hotel managers become involved in climate change adaptation and mitigation measures.

adoption in their hotels. There were four age groups analyzed in this study: managers who were 20-25 years old, 26-30, 31-35 years old, and managers who were older than 35 years. Statistical significance was found in nine out of fifteen attributes. Respondents older than thirty-five more likely agreed to all nine points related to climate change and environmental issues than those younger than thirty-five in this study. This was due to relation between long stay and the opportunity to have better experience regarding benefits of healthy climate and environment around resorts in which they were worked for long time.

Education was also another second significant factor in this study. Respondents with higher education level more likely to agree on seven points stated related to climate change issue and environmental

sustainability practices than low education level respondents. Relatively this is due to better level of understanding and awareness in high level of education respondents than lower level of education about climate change adaptation and mitigation practices. In contrary to previous research income and gender were identified as in significant factors in this study. This is due to difference in research location and target population that could bring knowledge and awareness difference among respondents. Managers were target population in this research whereas hotel guests that could not have the decision role to adopt adaptation and mitigation practices in resort hotels were target population in previous research. [27], researchers showed that, age could influence environmental sustainability practices. However, the study by [50], states that younger people tend to be more involved in environmental programs and projects than older peoples. Further they are also finding that education is insignificant to influence attitudes towards environment sustainability practices.

Climate change adaption and mitigation measures performance level of resorts

It was identified that, energy, water and waste-related issues were major challenges among Bishoftu hotels similar to hotels of entire world. Many resort hotels participate in energy-efficient equipment mostly energy efficient bulbs which is compatible to climate change mitigation practices. This study also found that resort hotel managers reported energy-efficient appliances and lighting as the third most important energy-saving practice. Even if such compatible measures started in all sample hotels, adoption of energy controlling and saving technology, energy saving campaigns, using renewable energy sources and adapt building design for energy saving were generally low.

Although, in terms of water conservation, this study found that while all resort hotels support this practice, they are still focused on water-efficient fixtures and it was identified that implementing water efficient gardening program was the second important and relatively the most implemented practice in resorts. Water conservation activities such as water saving campaigns in kitchens, water meter in guest room and participating in community conservation projects were still low. This was due to low concern, knowledge, available lake water around and low bill to access water to their resorts. The cost might be why resort hotels were not supportive of water conservation. However, the study of [16], [18], stated using water-efficient fixtures in hotels can reduce the amount of water used.

Similarly, green campus were observed in all sample resorts but most hotel managers view as, placing plants and flowers throughout their hotels, often as decorations to attract and stay their guests. But tree planting, conservation of existing natural forest and reforestation in resort campus contributes not only for attracting and staying visitors in resort but also crucial for the overall mitigation of climate change. Furthermore, it is interesting to note that Bishoftu hotel managers pay little attention to distributing awareness creation materials to encourage guests to be environmentally aware, involve in and provide carbon offset projects for guests and achieve green certification. Only one resort hotel participated in this activity. This is due to a weak guidance from owner and government due to less attention, no environmental policy targets set up in hotels corporate level. significantly less concern and deep knowledge regarding climate change and impacts.

Additionally, in terms of waste management all resort hotels were sorting waste in guest rooms, offices, and kitchens. It is identified that hotels are a large consumer of goods and this consumption results in concerns about their waste management. Respondents reported their involvement in responsible waste sorting practices focused not only on offices and kitchens but also on guest rooms. However, in this study, even if waste sorting in all sections has been done, the way of waste treatment and management was generally weak. Only Asham Africa resort used bio-fuel that uses solid and liquid waste as input and waste recycling method like plastic reuse. Previous studies support these issues as full implementation of adaptation and mitigation measures in resort hotel increase in market share [18], and cost savings that result from using energy efficient devices. Hotels are less likely to provide leaflets that describe their saving methods. [18], [24], Hotels become involved in waste management programs based on regional and national government support [24], [18], reported that Swedish hotels participate in waste sorting practices in offices and kitchens.

Factors influencing adoptions of climate change adaptation and mitigation practices

Similar influencing factors were identified in this study. Its interestingly identified in contrary to most previous research that, Owner or top manager's personal value and belief, government incentive for good achievement, and government policy and regulation were the most important influencing factors and motivators for the adoption of climate change adaptation and mitigation practices in resort hotels. Because if there is no commitment from top management of hotels and government toward climate change adaptation and mitigation measures it's impossible to use effectively financial and even knowledgeable human resources in hotels. Managers were target population in this research and the previous research target were hotel guests and hotel staff. So these could result different findings.

Managers of resort hotels also accept Customer demand, lack of financial resources and lack of knowledge were the next important factors influencing adoption of climate change adaptation and mitigation practices. Previous research supports this finding as so many factors were identified as barriers that prohibit hotels from implementing environmental practices such as, high costs, a lack of financial resources, and a lack of equipment and facilities. Additionally, [38], stated barriers to sustainability include not only problems with costs but also a lack of proper financing. Of the three factors studied—lack of support, perceived difficulty, and lack of demand—the most important barrier was found to be a lack of demand. [42], also believes that environmental practices and policies does not always have to involve capital intensive projects; it can create low cost, simple projects that can be implemented by employees and leadership commitment.

Recommendations

Generally, resort hotels in Bishoftu were not on the way of right track towards climate change adaptation and mitigation practices to support Ethiopian climate change resilient green economy. So, Hotels and responsible government body have to give attention to bring tourism and hospitality sector toward sustainability. It is better design green policy and strategy at national level to lead industry. Planning of education and training projects, green certification actions in hotels to build deep knowledge, motivation and commitment. The training should cover energy and water conservation, waste management,

promoting best experience, how to create environmental policy and guideline in hotels level. The government needs to work with hotel associations to implement sustainability practices, especially on behalf of budget hotels, because these types of hotels do not have the resources of large hotels. Hotel managers should pay close attention to, using bio-fuel and renewable energy sources, conservation of lakes water around them and generally compatibility of all practices to climate change adaption and mitigation. Especially the implementation of internationally popular adaptation practices such as, customer awareness creation programs, adopting water-saving and reuse measures; and involvement in local community conservation projects.

Tourism and hospitality industry contribute and largely affected by climate change impacts. So it's better to manage early towards sustainability to in enhance positive contribution of the sector. This is possible and move forward when rules (regulation) and incentive for better achievement implemented on the ground continuously. The lakes around these resorts are the main attraction and the important issue for their business sustainability. Even though the conservation activities of those resorts need to participate so many stake holders the role of the resorts is very high. but Lakes and beautiful land scape around were under risk. There were no tangible and significant conservation activities. Even the best experience begins in few resorts was not promoted well. Local communities which have the right to use these resources and have role to conserve were excluded. Therefore, resorts have to give local community right to use those lakes and benefit from every opportunity there. They have to participate to conserve the resources as well. For example, resorts can establish conservation projects and make local community to participate.it has two benefits: rehabilitate lakes and ownership development. There were best experiences in few resorts.so it's better to promote this best activity to other resorts to scale up and develop awareness of local community and stakeholders. Local government has to play great role generally, waste management system of the resorts is poor that can pollute the environment. so it's better to cooperate with city administration to develop modern way of waste management. For example, the experience of waste management by Bio – gas technology in Ashem Africa resort hotel. Future research may need to focus on the relationship between Attitude and sustainability practice, social responsibility of resorts regarding environmental and socio-cultural issue in order to determine the level of sustainability in resorts. Future research may need to compare the operations of hotels that have a green certificate with those that do not have. Furthermore, it will be necessary to conduct detail study of impacts of resorts on lakes around in this regard.

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