MANAGERIAL ATTITUDE AND IMPLEMENTATION OF ENVIRONMENTAL SUSTAINABLE PRACTICES IN THE HOTEL INDUSTRY OF PUNJAB

A Thesis

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award of the degree of

DOCTOR OF PHILOSOPHY

In

MANAGEMENT

By

Baljit Kaur

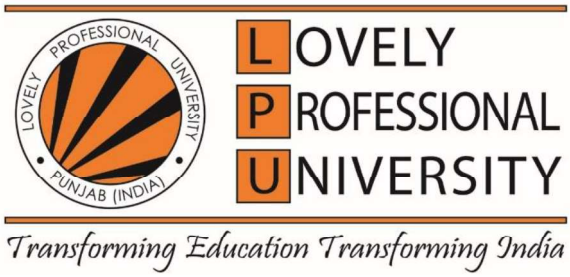
(Registration No.41500098)

Supervised by

Dr. Dheeraj Nim

Co Supervised by

Dr. Avinash Rana



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Declaration

1. I, Baljit Kaur, hereby declares that the thesis entitled as **"Managerial Attitude and Implementation of Environmental Sustainable Practices in the Hotel Industry of Punjab"**, submitted to the Lovely Professional University, Phagwara for the award of Ph.D. Degree in Management under the Faculty of Business & Applied Arts is an original research work done by me during the period July 2015-November 2019, under the supervision of **Dr.Dheeraj Nim**, Associate Professor, Mittal School of Business, Lovely Faculty of Business and Arts, Lovely Professional University, India (Present affiliation - Faculty of Management, Oriental University, Indore, Madhya Pradesh) and co supervision of **Dr. Avinash Rana**, Assistant Professor, Mittal School of Business, Lovely Faculty of Business and Arts, Lovely Professional University, India. This research work has not been submitted anywhere else for award of any Degree or similar title.

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Baljit Kaur

Department of Management,

Lovely Professional University

Phagwara, Punjab.

Dated:

CERTIFICATE

It is certified that Ms. Baljit Kaur (registration Number 41500098), is a student of Ph.D. in the department of Management, Lovely Professional University, Punjab, India. She is submitting a thesis on "**Managerial Attitude and Implementation of Environmental Sustainable Practices in the Hotel Industry of Punjab"** for the award of the degree of Doctor of Philosophy in Management**.** The work embodied in the thesis has been carried out entirely by the candidate as a research scholar under our joint guidance. This research work has not been submitted anywhere else for award of any degree or similar title, according to the best of our knowledge.

Dr. Dheeraj Nim (Supervisor)

Associate Professor,

Mittal School of Business,

Faculty of Business & Applied Arts,

Lovely Professional University,

Phagwara, Punjab-144411, India.

(Present affiliation: Faculty of Management,

Oriental University, Indore,

Madhya Pradesh- 453555, India)

Dr. Avinash Rana (Co Supervisor)

Assistant Professor,

Mittal School of Business,

Faculty of Business & Applied Arts,

Lovely Professional University,

Phagwara, Punjab-144411, India.

Date:

Abstract

Tourism is among the fastest expanding trades in the world economy attracting billions of dollars and providing employment to millions of people. International tourism attracts huge amount of foreign currency. Hotels are one of the most important components of tourism industry as tourist spends large amount of money on accommodation while travelling which ultimately help in boosting the economy. On the other hand, hotel industry also affects the destination in negative ways. Hotels are huge consumer of water, energy, and local infrastructure and subsequently produce huge quantity of waste and bring lots of carbon footprint to the destination.

Environmental sustainability is an important concept in hotel industry to deal with the negative impacts on surroundings. Environmental sustainable initiatives have been associated with environmental conservation, improved business image, financial gains, water saving, energy conservation and waste management competence. This concept has also become unavoidable due to environmental issues and stakeholders' pressure. Despite being so many benefits associated, hotels in some states of India are far behind in going green due to some reasons. Punjab is among such states and having only one certified ecotel hotel. This state is religious and business destination and attracts significant number of tourists annually, which has given rise to the positive economic conditions, expansion of hotel industry, other infrastructure and on the other side degradation of environment. Punjab is at crawling stage in adopting the concept of Environmental Sustainable Practices (ESPs) in the hotel industry.

Great research has been done on exploring various factors behind pro-environmental behaviour of hoteliers and many studies have reported managerial environmental attitude as significant influential factor.

This research study was aimed to examine the current state of ESPs and managerial environmental attitude in the classified hotels of Punjab. Further, this study was intended to explore an association among managerial environmental attitude and the ESPs implemented in the sample hotels. Barriers and motivational factors behind the implementation of ESPs were also to be explored.

Based on the literature review of earlier studies, research questionnaire was developed to measure the above-mentioned constructs. An original empirical approach has been adopted with the quantitative survey. The research questionnaire was designed to investigate some demographic profile of respondents; characteristics of hotels; environmental attitude of respondents; implementation of ESPs with dimensions of water saving, energy conservation, waste controlling & overall sustainable practices; managerial perspective about the barriers and motivational factors that impact the execution of ESPs.

The census of forty-nine hotels was taken altogether from one star to luxury hotels providing five star deluxe facilities registered with Hotel and Restaurant Association of North India (HRANI).

In addition, thirty-nine hotels of repute having more than 10 rooms were selected on judgmental sampling to increase the response rate, corresponding to total 88 hotels. Overall 221 respondents from 72 properties have completed the research questionnaire in which 202 responses were found usable.

This study proposed and tested hypothesized comparison between four dimensions of ESP and two clusters of managerial environmental attitude with the characteristics of hotels. ANOVA and pairwise test of Tukey HSD was applied to differentiate the implementation of environmental sustainable practices on the basis of characteristics of respondent hotels and statistically significant difference was observed in majority of ESPs. Cluster analysis and Chi Square test were used to evaluate the managerial environmental attitudes based on the characteristics of respondent hotels. Accordingly, after application of cluster analysis two clusters have been identified for managerial environmental attitude. Both the clusters were allotted with hotels having almost different characteristics and subsequently these clusters showed different attitude towards environmental issues. The results of Chi square test further revealed that managerial environmental attitudes are significantly impacted by the characteristics of the hotels. The relationship between managerial environmental attitude and implementation of ESPs was measured by factor analysis and multiple regression analysis. The results of factor analysis discovered three factors from the 10

items (5 items out of total 15 items were removed because of low factor loading). The results of multiple regression found 2/3 factors statistically significant in controlling the implementation of ESPs in the hotel businesses in the study area.

The Kendall W test was applied to measure the importance of motivational factors and barriers in the implementation of ESPs in the hotel businesses of Punjab. The results revealed that there were eighth items of motivational factor and eight items of barriers that play important role, while remaining items of motivation and barriers were not found playing significant role behind implementation of ESPs in the hotel industry of Punjab.

By focusing on constructs and the findings of hypothesized relationships, this study tried to fortify the observed grounds of environmental sustainable research. The results of this research are centred on a survey of 72 hotel properties. This research study facilitates a stronger assessment of the strength of the relationship reported in the earlier studies in the context of Punjab state.

Most of the respondent hotels were found voluntary involved in some of water saving; energy saving and waste controlling programs. Majority of managers were having positive attitude towards sustaining the environment. The result revealed significant correlation between the managerial environmental attitude and number of environmental sustainable practices executed in their concerned hotels. Managers were found contributing for the sustainability of environment because of their personal attitude towards conservation of environment and financial benefits of going green. Most implemented environmental sustainable practices are those, which require minimum implementation cost and provide financial gains to property. Wind power and rainwater harvesting were adopted by fewer organizations as the implementation is associated with the infrastructural changes and need of more space to carry out these practices.

The findings of this research discovered that managerial attitude plays significant role in the adoption and implementation of environmental sustainable practices in a hotel. The characteristics of the hotels like ownership; classification; tariff rate and number of rooms have significant effect on managerial environmental attitude and ESPs.

The lack of implementation of ESP was also linked with different barriers faced by hoteliers. Initial implementation cost of ESPs; high fee of green certification and complicated method of green accreditation were three most identified influential barriers in the implementation process of environmental sustainable practices.

The three most influential motivational factors were top management support; reduced operational cost and legislation.

This research study discovered the actual applied ESPs in the respondent hotels by providing the deep understanding that how the managerial environmental attitudes are related to application of environmental sustainable initiatives in routine tasks of the hotels. Although managers are expected to behave responsibly towards sustaining the environment, but they do not always because of some limitations behind.

Results recommend that hoteliers should realize the significance of incorporating ESPs in their hotels. The hotel business of Punjab needs to work hard to implement more ESPs and to develop an array of certified green hotels. In order to promote the green concept among hoteliers in Punjab, Government; NGOs and Stakeholders should raise the awareness level of managers and owners by communicating the benefits of implementing ESPs in business. Government should create some basic environmental guidelines for hotels to get the approval from concerned authorities. Monitoring of these guidelines need to be a continuous process. Government should also contribute in the initial implementation expenses of ESPs to make the process easy to adopt for hoteliers. Conceptual theory established in this research study may be followed by other researchers either in straightway in testing hypothesized relationship or as a foundation for developing refined and extended environmental research.

Key Words- environmental sustainable practices; implementation; managerial environmental attitudes; characteristics of hotels; relationship; barriers; motivational factors.

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The submission of this doctoral thesis will remain partial without acknowledging the support that I received from many distinguished people.

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List of Abbreviations and Acronyms

CFC-Chlorofluorocarbon

CFL-Compact Fluorescent Light

CHPL-Concept Hospitality Pvt. Ltd.

CP-Control of Pollution

EB-Existing Buildings

EE-Environmental Education

EIA-Environmental Impact Assessments

EI-Environmental Information

ESPs-Environmental Sustainable Practices

FDI -Foreign Direct Investment

FEE -Foreign Exchange Earning

FF&E-Furniture, Fixture & Equipment

FHRAI -Federation of Hotel & Restaurant Association of India

GDP-Gross Domestic Product

GSDP-Gross State Domestic Product

HRACC-Hotel and Restaurant Approval & Classification Committee

HRANI-Hotel & Restaurant Association of North India

HVC-Hospitality Valuation Service

HVS-Hospitality Valuation Services

IGBC-Indian Green Building Council

IHEI-International Hotel Environmental Initiatives

IHG- International Hotel Group

ISO-International Organization for Standardization

LED-Light Emitting Diode

LEED-Leadership in Energy and Environmental Design

MoEF-Ministry of Environment and Forest

NC-New Construction

NEP-New Environmental Paradigm

PHTPB-Punjab Heritage and Tourism Promotion Board

UNCED-United Nations Conference on Environment and Development

UNEP-United Nations Environment Program

UNESCO-United Nations Conference on Environment and Development

USGBC-United State Green Building Council

WCED-World Commission on Economic Development

WTTC -World Travel & Tourism Council

WTTERC-World Travel & Tourism Environmental Research Center

Chapter 1: Overview

1.1. Introduction

This chapter discusses reasons behind studying managerial environmental attitude and its relationship with implementation of Environmental Sustainable Practices (ESPs) in the hotels of Punjab, India. It also gives description about research background, research gap, research problem, significance of study, research questions, and description of survey state and organization of thesis.

1.2. Research Background

The hotel industry in Punjab received benefits from the development of tourism and travel businesses in the last ten years. According to a report published by The Hindustan Times, Punjab stands at 12th position in India in tourist receiving (Sharma, 2017). State earned 224 million in 2012 from tourists, while it spends just 0.19% of state budget for tourism activities. The domestic tourist arrival in the state has risen to 2.57 crores in 2015 from 1.05 crores in 2010 and the international tourist arrival has risen to 2.42 lakh from 1.37 lakh in the same period (2010-2015) (Sharma, 2017). In a research study of service sector in Punjab and Haryana, it was observed that service sector pays important contribution to the Gross State Domestic Product (GSDP) and hotel and restaurant businesses play a vital role in total contribution of service sector (Singh & Singh, 2017). The following Table 1 describes the contribution of service sector to GSDP of Punjab.

Table: 1 Service Sector Contribution to GSDP of Punjab during Specific Time on Percent basis

State	1980-81	1990-91	1991-92	2000-01	2010-11	2014-15
Punjab	30.86	32.18	31.97	35.42	43.34	49.76

Source: (Singh & Singh, 2017)

The hotel industry is having noteworthy effect not only in positive direction on economy of the state but in negative direction also on environment and social aspects.

On the other side, hotels consume huge amount of energy in comparison to other sectors of tourism, similarly water consumption is at high end in the hotel industry. Energy is used for transporting facility, air-conditioning, heating, cooking, laundry etc., resulting in reduction of energy resources at destination that further possibly contribute to global warming etc.

Hotels consume water for many purposes such as cold water is used for drinking, swimming pools, washrooms, gardening, kitchens etc. The high-end consumption of energy and water results in scarcity of these basic supplies at the destination. The problem becomes worse, when this high consumption of water is released as grey water in the surroundings that spoils the area and water bodies around.

Although, the hotel industry does not have large contaminated effects on environment, but it survives on natural resources and being huge consumer of water, energy and non-renewable resources, produce threats to surrounding environment (Sloan, et al., 2005; Legrand, et al., 2013). Many previous studies have emphasized the need of incorporating ESPs in the hotel industry to mitigate the adverse environmental impacts (Bohdanowicz, 2005; 2006; Erdogan. & Tosun, 2009; Molina-Azorín, et al., 2009).

According to a study of Spanish hotel industry by (Céspedes-Lorente, et al., 2003) this industry is not under great pressure to implement ESPs in comparison to several other industries. Kasim (2006) stated in his research study that the effective execution of sustainability in tourism require the significant input of all the stakeholders and tourism businesses. Adding to this (Cennamo, et al., 2009) emphasised on the requirement of active participation of the patrons in corporate resolution for the development of environmental sustainable policies.

Environmental sustainability has become a vital concern for most of the industries as well as for the hotel industry today due to deteriorating condition of environment and increasing level of environmental awareness among customers, social groups and government. Many research initiatives have been made to explore this trend of hotel industry. This industry is adopting ESPs since last many years and transactions increasing day by day. Hotel industry is growing at great speed, and its efforts

towards sustaining the environment can contribute a visible effort in the preservation of our environment.

Now the question arises, what is sustainability?

Behind the pro-environmental behavior of hotels, lies the concept of sustainability. Brundtland Report stated, "Sustainability development is a development that meets the need of the present without compromising the ability of future generations to meet their own needs". This concept is found most essential to be complied by all industries comprising of hospitality industry to sustain the environment resources. Houdré (2008) described sustainability as best operation for the success of hotel operation. Ricord & Smith (2009) defined sustainability as a process in which people recognize their strength and develop the quality of their life in accordance with protection of basic support system of nature.

The concept of sustainability evolved when United Nation has organized its First International Conference on Human Environment in 1972. The World Commission on Environment and Development (WCED) 1987 and International Hotels Environmental Initiatives (IHEI) 1992 are considered forerunner in greening the hospitality industry worldwide.

Intercontinental Hotel Group (IHG) introduced the green guidelines in 1991 in the form of International Hotels Environmental Initiatives (IHEI), when many international hotel organizations felt a need to work altogether. The World Travel and Tourism Council (WTTC) as cited by (Kirk, 1998) realized the key environmental issues like weakening of ozone layer, pollution of land and water resources, acid rain, global warming etc. WTTC also made clear that hotels do not produce major threat to environment but as the large industry, they can significantly contribute towards the sustainability of natural resources.

The idea of sustainability has been accepted and developed in the hotel industry since 1990.Sustainability concept of hotel industry is different from the sustainability concept of other manufacturing industries. In the manufacturing industries sustainability concept is developed keeping in view the grave issues like: global

warming, ozone depletion, acid rain (Stipanuk & Roffmann, 2015), while the sustainability concept in regard to hotel industry is concentrated on ESPs like energy conservation, water conservation and waste reduction (Kirk, 1995; Stipanuk & Roffmann, 2015).

There are many pressures on hotel industry to minimize the negative effect on environment (Kirk, 1995) . The motivational factors such as government legislations, customer demand, public opinion, economic policies and financial advantage also control the pro-environmental behavior of hospitality industry

Hotel industry worldwide has recognized the need of going green and adopting ESPs since 1990 due to stakeholders' and customers' awareness and to survive economically. The first 100% ecological hotel was established by IHG in 2008.The main feature of this hotel included; the use of wind power, solar energy, rain water harvesting, recycled material was used for furniture, fixtures and windows glasses.

In Asia, the Orchid Mumbai, India was the first certified ecotel hotel (1997) that reduced water consumption by 50% using drip irrigation for gardening. Other features included the roof top swimming pool to reduce the heat absorption from top and use of eco-friendly material throughout the building. This hotel took effective steps to reduce the waste, noise pollution, air pollution, and water pollution at the destination. The Orchid Mumbai is considered as leader and inspiration to all hotels in Asia and India that adopted green practices subsequently.

ESPs in relation to hospitality industry are not limited to environmental protection. The sustainable operations in hotels include the environmental sustainable actions like use of energy conserving lighting, reduction and reprocessing of waste material, reusing of discarded bed and bath linen. ESPs of hotels have been studied by many research scholars (Bohdanowicz, 2005; Mensah, 2006; Erdogan, 2007; Scanlon, 2007; McNamara & Gibson, 2008; Aggarwal, 2015).

The financial benefits like cost reduction in daily operations are also considered at large (Stipanuk & Roffmann, 2015). Now many hotels are going green and taking advantage of financial gains and meeting the customer demand (Gustin & Weaver,

1996; Jauhari & Manaktola, 2007), achieving improved corporate image and water and energy efficiency (Iwanowski & Rushmore, 1994; Kirk, 1995). ESPs are associated with many benefits like cost reduction, financial gains, and an edge over competitors, legislation compliance, employees and customer loyalty etc.

The hotel industry can significantly contribute towards environmental sustainability by implementing some energy and water conservation practices and reducing waste at source. Some green practices can be incorporated in daily routines with little initial investment.

The environmental awareness among the stakeholders and travelers has initiated the idea of green certification among the hotel organizations. Hotel trade leaves several adverse impacts on the environment both directly or indirectly, therefore green certification has become inseparable concept for the hotel organizations throughout the world. There are many agencies that evaluate the green initiatives of hotels and provide the certification like Leadership in Energy and Environmental Design (LEED); International Organization for Standardization (ISO) 14001; The Green Globe Certification; Indian Green Building Council (IGBC) etc.

Most of the earlier environmental research studies related to tourism and hospitality industries are focused on studying the type of ESPs implemented by the green hotels (Bohdanowicz, 2005; Mensah, 2006; Losanwe , 2013; Aggarwal, 2015), the barriers (Calvache, 2008; Tzschentke, 2008; Doody, 2010; Shairullizan KamalulAriffin, 2013), and motivational factors (Bohdanowicz, 2005; 2006; Kasim, 2007; Graci & Dodds, 2008) and the role of managerial environmental attitude and awareness in the pro-environmental actions of the organizations (Bohdanowicz, 2005; Sloan, et al., 2005; Park, 2009; Chan, 2010). The efforts of academic researcher resulted in significant but fragmented research that was focused mainly on developed countries. In spite of significant number of literatures on environmental concern of hospitality industry, only few have explored the reasons why some hotels behave more pro-environmentally than others in the same type of internal and external situations and what factors work as driving force behind the pro-environmental actions of hotel organizations.

This research tried to find out the reasons behind the difference of rate of pro-environmental behavior by analyzing the relationship among managerial environmental attitudes and implementation of ESPs in the concerned hotel. This research also examined the managerial' observed barriers and motivational factors that are working as driving force behind the voluntary environmental sustainable actions of hoteliers in the Punjab hotel business.

1.3. Research Gap

The previous research studies related to environment initiatives of hotel industry were mainly conducted in developed countries as the hotel industries of these nations have recognized and applied the concept of ESPs quite early. On the other side, developing countries have limited access to these types of studies as the concept of ESPs is still at growing stages. In the perspective of India, such studies are more restricted. In addition to this, there are negligible research studies that focused on green practices of hotels of a particular region/state in India like (Aggarwal, 2015; Bhatt & Kaur, 2015).

Researchers and academicians never paid attention towards the negative impact of hotel industry on the environmental conditions and the initiatives of hoteliers for mitigating these negative impacts in the survey state Punjab. The concept of ESPs in the hotel businesses is flourishing in other states of India, while Punjab is crawling with only one ecotel certified hotel in the state. According to various previous studies managerial environmental attitude plays a vital role in the acceptance and execution of ESPs in the organization (Bohdanowicz, 2005; Best & Thapa, 2013). There are few studies available on ESP of hotels like (Bhupinder Bhatt, 2015) but relationship of managerial environmental attitude and implementation of ESPs in Punjab hotel industry was never studied.

In addition to this, the rate of difference of implementation of ESPs and managerial environmental attitudes based on the following characteristics of hotels was rarely studied on worldwide level;

- Number of rooms in a hotel.
- Category of hotel.

- Type of ownership of hotel.
- Tariff of hotel.

To fill the above mentioned research gap, I conducted this research study to examine the association between managerial environmental attitude and the current ESPs in the hotel industry of Punjab, India. Managerial observations about the motivational factors and barriers behind the actual adoption and implementation of ESPs were also explored. This study will offer an improved understanding of factors of pro-environmental efforts of hoteliers in the region of Punjab

This study integrated most studied theoretical environmental constructs (ESPs, managerial environmental attitude, barriers and motivational factors) and explored the same in context to Punjab state of India. The one of the major motive of this research study was to find out the variance of rate of implementation of ESPs and managerial environmental attitude based on different characteristics of hotels and to access the relationship of managerial environmental attitude and implementation of ESPs.

This study was diverse from previous studies in view of the different internal and external factors of the state like economic conditions, legislations, type of business and customers. In an attempt to understand the relationship of managerial environmental attitude and implementation of ESPs, this study collected data from cross category hotel (one star to luxury hotels providing five star deluxe facilities) possessing different characteristics like;

- Number of rooms in a hotel.
- Category of hotel.
- Type of ownership of hotel.
- Tariff of hotel.

The statistical analysis combined the results for cross categories of hotels based on different characteristics. This study tested the relationship mentioned in previous studies by identifying whether that relationship exists over time and geographical area in Punjab also.

The data was collected from managerial level personnel as they play a key role in strategic and policy related matters in an organization and the process of actual implementation of decisions is initiated or routed through them.

1.4. Research Problem

Hotels are the major component of tourism sector and significantly touch the surroundings in both adverse and constructive ways. Most of the negative impacts are irreversible and directly affect the natural resources and environment of the area. Tourist arrival rate is going through an extraordinary progress in the recent decades in Punjab. This has fueled demand for more hotels, which in turn has serious effect in terms of challenges of waste generation, excessive consumption of energy and water resources. According to (Kirk, 1995) hotels have huge number of activities, which together leave significant negative influence on the destination environment. Legrand, et al. (2013) stated in their book that a normal hotel releases 160-200 kg of CO2 per sq. meter of room floor area/per year. Hotels are huge consumer of water that is used in kitchens, laundry, guest bathrooms, swimming pools, watering of gardens etc. Legrand, et al. (2013) further reported the estimated water consumption in hotels 170-440 liters per guest/per night. The large intake of water is directly linked to discharge of larger quantity of polluted water in the surrounding areas. Hotels produce solid waste at the rate of one kg per guest/per night.

The negative impact of hotel sector and global environmental degradation requires the positive efforts of role players to reinforce ESPs in hotels. Harris (1995) recommended to introduce the sustainable practices in large organization as a first step so that they can lead the concept, while (Pigram & Wahab, 1997) stated to raise the concern of small hotels towards sustainability concept. The demands of customers, government, social groups and employees have made adoption of ESPs in the hotel industry most critical issue today. Hotels being the main sector of hospitality services and tourism can performance a vital role to minimize the environmental deprivation by adopting sustainable growth. Hotels with positive efforts can reduce waste production, energy and water consumption. It has become important to sustain the environment for the benefits of society and hotel industry itself.

The survey state Punjab is famous tourist destination for foreigners as well as domestic tourists. Currently, there are many hotels and restaurants in the state to cater the needs of travelers. Many new projects of hotels have been approved to deal with the increased tourism in the state. As discussed above this increasing number of hotel establishments would also bring significant carbon footprint to the surrounding environment. The hotels in the Punjab are quite behind in adopting the formal ESPs in daily operation. The concept of green hotels and formal implementation of ESPs by the hotel industry is almost negligible in the state. There is not even a single certified green hotel in the state.

Banerjee, et al. (2003) stated that the rate of implementation of pro-environmental practices advocate the importance of environmental issues faced by organization. According to (Hart & Ahuja, 1996; Sharma & Vredenburg, 1998) the corporates operating within same industry, regulations and social conditions can have different environmental strategies, while (Sharma, 2000) explored the same environmental management among the common industries as they are dealing with similar customers, government regulations and stakeholders. Now the next question arises, what makes the difference in the rate of implementation of ESPs within the same operational situations?

The study of (Banerjee, 2002) observed that the pressure from government, customers, social groups effect the environmental concern and action of hoteliers. Tzschentke, et al. (2004) found in their research that the environmental actions in small organizations are influenced by the environmental concern of owners and managers. According to (Hemingway & Maclagan, 2004; Best & Thapa, 2013; Hall, et al., 2016) the managerial personal values act as main driver behind all motivational factors. The actual implementation depends upon the managerial environmental attitudes and the many other internal and external supporting aspects. Many other researchers (Bohdanowicz, 2005; Best & Thapa, 2013) supported the relationship of managerial environmental attitude and implementation of ESPs. This indicates that top managers' environmental concern significantly influence the environmental action of concerned organizations. Therefore, the study of environmental attitudes of top

management can provide major understanding of the environmental action of the hotels.

There are many previous research studies, which have studied separately the perception of hoteliers towards ESP (Park, 2009; Prayag , et al., 2010) and ESPs of hotels (McNamara & Gibson, 2008; Bhatt & Kaur, 2015). The positive support from the top administration for the effective application of ESPs is found important as it can positively influence the overall organizational understanding towards environmental issues and awareness (Zutshi, 2004).

Many studies, as discussed above have studied the managerial environmental attitudes and environmental sustainable action of hospitality organizations as two separate topics. There is restricted research on the hoteliers' environmental attitude and its relationship with the implementation of ESPs in the hotel industry of developing countries like India and this relationship is not clearly defined from these previous studies.

Moreover, there is no research available on this relationship in the hotel industry of Punjab, India. Therefore, it was found suitable to measure the environmental attitudes of hotel managers in the Punjab hotel business to observe the causes behind the nil development of green hotels and rate of difference of voluntary implementation of ESPs in different categories of hotels.

This research study was directed by recognizing the economic importance of hospitality sector to GSDP as well as protecting and sustaining the environment for the future generations. Both of these objectives can be achieved by introducing or developing the green concept among the hotel industry in the area, otherwise the growing figures of hotels in the state can produce huge adverse effect on the environment.

1.5. Significance of Study

It is beneficial to develop a scene of hotels' contribution to the development of a country or state to justify the analysis of ESPs of hotel industry. According to (Gartner, 1996) as cited by (Faulk, 2000) tourism has been considered as

'compound' for the regional development because it helps in economic, physical ,and social culture development that can be used by other industries later on. Gartner (1996) further said that Foreign Exchange Earnings (FEEs) related to tourism can be further utilized for the development of other industries and ultimately for the development of the regional economy. However, the mass tourism activities used for economic development are associated with many problems also. Gartner (1996); Pigram & Wahab (1997) and many other researchers have identified many issues related to mass tourism to local economies, local people, local environment like income leakage; prompting increase in the rate of daily commodities and land values; the loss of social and cultural values and increased burden on natural resources etc.

While the growth of tourism and hotel industry is beneficial to economy and infrastructure development, it is also effecting environment and natural resources in negative ways. The carbon footprint of tourism can be neutralized by adopting environmental sustainable initiatives during construction and in daily operations. There are many certified green hotels in other parts of India but Punjab is far behind in adopting green hotel concept.

This study is a small attempt to identify the reasons of dull development of certified green hotels in the state. As discussed in earlier studies the managerial environmental attitude plays an important role behind actual implementation of ESPs in an organization, this research also tries to find whether environmental attitude of hoteliers' is affecting the acceptance and implementation of ESPs in the hotels of Punjab. It could be argued that the same type of studies that are conducted on other geographical areas could be extended here. However, the attitude and rate of implementation of ESPs are affected by geographical area of country, characteristics of hotels, customer demand etc. as explored by (Bohdanowicz, 2005; Mensah & Blankson, 2014; Teng, et al., 2014). On the other side, a dare is often faced when the research of developed countries is subsequently being considered for developing countries, as the context of developing countries is found entirely different economically, knowledge wise, technology wise from developed countries.

This study was in need as there is no research study available that studied the causes behind crawling stage of environmental friendly hotels in the region and the role of managerial environmental attitude on the implementation of ESPs.

The study of managerial environmental attitude and ESPs based on the characteristics of hotels is necessary as these characteristics not only effect attitude and the level of EPSs but overall adoption rate of green concept in the organization. It is expected that this study can lay a practical groundwork for future researches as well as for the stakeholders.

This topic was not merely selected for academic research but also for the need of sustaining the environment of the Punjab region. The hotel industry is going through the phase of tremendous growth these days and subsequently leaving many affirmative and adverse impacts on the destination. Many researchers on worldwide level are addressing the development and impact of hotel industry, but these researches primarily focused on developed countries. Negligible research is done in reference to Indian hospitality industry and the Punjab region is almost untouched in this regard. This research complements previous studies by exploring important insight on how the environmental attitude of managers (based on characteristics of hotels) affects the implementation of ESPs in hotels.

In conclusion, the main objective of this research study was to recognize the managerial environmental attitude held by the hotel managers in Punjab and to find out the impact of these environmental attitudes on the actual implementation of ESP in the organization. This research does not emphasis on tourists who visit these hotels but, on the people, who run these hotels and their environmental sustainable actions, their environmental attitude, their observation of motivational factors and barriers that contribute in environmental sustainable actions.

The following aspects have been explored through this research:

- The level of application of ESPs in the hotels of Punjab based on the characteristics of hotels e.g. number of rooms/size of hotel, ownership of hotel, category of hotel and tariff of hotel.

- The managerial environmental attitude of hoteliers based on characteristics of hotels e.g. number of rooms/size of hotel, ownership of hotel, category of hotel and tariff of hotel.
- The relationship of managerial environmental attitude and implementation of ESPs.
- Managerial observed barriers and motivational factors behind adoption and implementation of ESPs.

Overall, the results of this research are expected to be valuable to hotel industry, policy makers, local people and regional hotel associations. This study may prove significant, as I have studied an under-researched area of Punjab hotel industry. Most of the earlier studies related to hotels' ESPs were focused on developed countries only. It was assumed that the results of this study will highlight the determinant factors of ESPs in association with small regional area (Punjab) that is otherwise a well-known tourism destination worldwide.

1.6. Research Questions

Most of the earlier environmental studies related to hotel industry addressed some basic questions like: What are the basic environmental sustainable practices adopted by hotels? (Ustad, 2010; Abaeian, et al., 2014; Aggarwal, 2015; Bhatt & Kaur, 2015), what are the attitudes or views of hoteliers towards environmental sustainability? (Deng, et al., 1992; Bohdanowicz & Martinac, 2003; Chan, 2010; Baker, et al., 2014), how environmental attitudes affect the actual implementation of environmental sustainable practices? (Ajzen & Fishbein, 2000; Doody, 2010; Chou, 2014), what are the factors that help in adoption of ESPs? (Tzschentke, et al., 2004; Zaiton Samdin, 2012; Teng, et al., 2015) and what factors are proving barriers in actual adoption of ESPs in hotels? (Tzschentke, et al., 2008; Doody, 2010; Zaiton Samdin, 2012).

Most of the previous researches have explored the ESPs and environmental attitude of hoteliers' separately. There are very limited studies which studied the direct relationship of managerial environmental attitude and actual implementation of ESPs. However, available research studies on relationship have not studied the magnitude of managerial environmental attitude in relation to implementation of ESPs in specific

region of Punjab, India. This study enables a test of previous studies that were conducted internationally or nationally by identifying whether the same relationship of managerial environmental attitude and implementation of ESPs prevalent in Punjab too. Managerial observations about barriers and motivational factors behind implementation of ESPs were also explored.

Therefore, research intends to answer the following research questions in context to survey state Punjab, India:

Research Question 1

What are the existing environmental sustainable practices implemented in the hotel industry of Punjab?

In the previous studies, the rate of implementation of ESPs found diverse in all the hotels at same geographical locations. Some hotels reported more pro-environmental actions while others are mediators and some organizations have not started any action of sustainability in their concerned properties. Many previous research studies on pro-environmental actions of different organizations and hotels found the difference in the rate of implementation of ESPs based on the following characteristics of hotels;

Number of Rooms/Size of the hotel

Arora & Cason (1996) in their study observed a positive association among the size of the business and pro-environmental actions. Aragón-Correa (1998) also mentioned in their study that larger multinational companies have more formal environmental policies and management. According to (King & Lenox, 2001) larger companies are associated with larger production and more probability of green accreditation. Min & Galle (2001) mentioned the increased purchasing power of large companies for green technologies. The large sales volumes are associated with more availability of resources that positively affects the acceptance and execution of environmental sustainable measures (Melnyk, et al., 2003) . The study of reasons of going green in serviced accommodation by (Tzschentke, et al., 2004) reported that pressure of stakeholders for going green increases with the size of the establishment and environmental performance of the firms' decreases significantly in accordance with

the size. Larger firms have more progressive environmental management system as these organizations possess more financial capitals available to invest. In consistency (Massoud, et al., 2009) also found that larger organizations are more environmental friendly than smaller organizations.

In consistent (Bohdanowicz, 2005; Mensah, 2007) also observed same relationship in the context of hotel industry and stated in their studies that larger hotels are at forefront in implementing ESPs in their organizations. Gil, et al. (2001) also confirmed the same relationship in the context of service organizations and observed that larger hotels implement more formal environmental management practices in comparison to smaller size establishments. Small hotels are lacking behind mainly because of thought that small hotels do not leave significant negative impact on surroundings (Lepoutre & Heene, 2006).

In general, hotel size is associated with the total of guest rooms available in the organization. Larger hotels are expected to implement more ESPs because of more availability of required resources and higher perceptibility. There are many studies that support the importance of company size in the implementation of green practices (Claver-Cortés, et al., 2007; McNamara & Gibson, 2008).

In comparison to the result of earlier studies that reported positive relationship between company size and environmental sustainable actions, (Russo & Fouts, 1997; Klassen & Whybark, 1999) reported indirect association among company size and pro-environmental actions.

In spite of these few studies that observed indirect relationship, there are abundant research studies that provide base to the idea that there is positive association among the size of the organization and pro-environmental actions.

Category of Hotel

Many preceding studies have observed the positive association between the category of hotel and the level of involvement in formal and effective environmental sustainable initiatives.

The positive connection was observed among the category/class of the hotel and the level of involvement in the environmental sustainable initiatives of the firm (Mowforth & Munt, 1998). In consistent (Gil, et al., 2001; Rivera, 2002) linked the relationship of higher category of hotel and the more involvement in environmental sustainable actions with the availability of more resources and attitude of employees that subsequently increase the capacity of higher classified hotels to introduce the ESPs in the operation.

Similarly (Raderbauer, 2011) related the rate of implementation of ESPs to the category of the hotels and reported that higher classified star hotels have higher rate of actual implementation of ESPs. Mensah & Blankson (2014) conducted their study on different categories of hotels in Accra to find out the rate of difference of implementation of ESPs. He reported that three to five-star category of hotels were more involved in the pro-environmental initiatives and implemented more formal environmental sustainable initiatives in their organizations in comparison to one and two-star category of hotels. Further (Mensah & Blankson, 2014) also observed significant positive association in-between the class of hotels and some environmental initiatives like appointment of an officer to look after the environmental actions, formal green certification, formal environmental policy and a history of implementation of ESPs in the organizations. They reported formal environmental actions in 54.5% of three to five star categories of hotels in comparison to 16.7% of budget hotels. However, they have not observed any relationship between the class of hotel and actual eco-friendly actions like green purchasing, the use of green products etc.

Ownership of the Hotel

Many researchers (Bohdanowicz, 2005; Ayuso, 2006; Rahman, et al., 2012) reported that chain hotels are stronger adopter of ESPs in comparison to hotels that work independently because of marketing experience, where green differentiations exist and the information transfers among the affiliates.

Generally, chain affiliated hotels adopt standardized activities. Gil, et al. (2001) observed that chain hotels transfer their knowledge about approval process, adoption

and implementation of ESPs. This knowledge sharing eliminates the obstacle of lacking of awareness and lacking of professional help in the implementation of environmental management system.

Gil, et al. (2001) as cited by (Calvache & Evra, 2008) found that chain hotels support their individual units in the following manners-

- Chain hotels impose some minimum required standards for environmental sustainability in context to market their uniform standards.
- Provide technical advices to individual properties to start up any such activity.
- Access of affiliated properties to ecological markets is made easy.
- Provide professional training on environmental issues and environmental sustainability actions.

In consistent (Massoud, et al., 2009) found internationally affiliated/franchise/chain and large organizations more environmental friendly than small organizations.

In conclusion from the previous studied it is found that chain affiliated hotels are more pro-environmentalist in comparison to non -affiliated hotels.

Tariff/Financial Position of the Hotel

In spite of providing financial gains, ESPs are not accepted by the organizations because of many actual and assumed financial reasons (Fischer & Schot, 1993).Many studies have observed that financial implications regarding increased operational costs is the key barrier behind the execution of green practices especially in context of medium and small organizations.

Bramwell & Alletorp, (2001) & Sloan, et al., (2005) emphasised that initial implementation cost of ESPs was obstructing factor in actual adoption of the concept. Sloan, et al., (2005) further stated that profitability of hotels plays a vital role in adopting and implementing the ESPs in the organization. Brammer, et al. (2006) as cited by (Andrikopoulos & Kriklani, 2013) reported that firms that have more financial resources likely to invest more in pro-environmental activities and subsequently market its pro-environmental efforts on websites to enhance the

relationship with stakeholders. In addition to this, (Castelló & Lozano, 2011) found in their study that profitable firms initiate more environmental sustainable actions as these organizations want to maintain the good relation with society so that societies keep on supporting these firms for following legislation, existence and growth. Similarly (Park, et al., 2014) found a correlation between the occupancy rate, profitability and implementation of ESPs in the hotels. The literature review suggests that hotel industry may not be willing to spend money, time and efforts for the implementation of ESPs due to shortage of resources.

In conclusion, it is summed up that there are many preceding research literatures that reported the more ESPs of firms that possess sufficient financial resources. In this research study, an attempt was made to explore the same association of financial resources with the rate of implementation of ESPs in the survey state.

In conclusion it is stated that this study explores collectively the effect of all independent variables like number of rooms, category of hotel, ownership of hotel and tariff of hotels on the implementation of dependent variable that is ESPs.

To support this research question, hypotheses were developed for measuring ESPs keeping in view the above-mentioned characteristics of hotels (hypotheses are explained in chapter 3).

Research Question 2

What is the attitude of managers towards environmental sustainable practices?

The rate of implementation of ESPs is not an independent variable, rather it depends upon many variables. The managerial environmental attitude is one of the important variables that significantly affect the acceptance and execution rate of ESPs in the hotel industry. This study was designed to measure the environmental attitude of managers among the hotel industry of Punjab. These managerial environmental attitude was tested against the specific characteristics of the hotels like number of rooms (size) of the concerned hotel, type of ownerships of hotel, categories of hotel and tariff (financial position) of hotel.

Previous studies found difference in managerial environmental attitude of hoteliers' based on above-mentioned characteristics.

Number of Rooms/Size of the Hotel

Literature review reported the less harmful impact of small organizations on the surrounding environment and subsequently these organizations pay less concern to environmental sustainability. According to a report of (Wheeler, 1999), smaller hotels leave less negative impact on the environment in comparison to larger hotels. Dewhurst & Thomas (2003) conducted a research on non-regulatory small tourism firms in UK National Parks and observed that these small organizations were generally managed by the owners and their environmental attitudes were not developed by corporate policies but formed by their own individual perception towards environmental problems, and the perceived benefits of environmental actions and understanding of the type of action for the environmental sustainability. In consistent (Bohdanowicz, 2005) in her study of European hotels observed that the employees of large and chain affiliated hotels were having more optimistic environmental attitude in comparison to independent and small hotels. The study of (Mir & Feitelson, 2007) reported that size of the firm puts restriction on the environmental action of concerned organization. They further added that small firms are less responsive to pressure of non- government organizations. Similarly (Mensah & Blankson, 2014) stated that higher class and larger hotels were extra dedicated for formal environmental management and eco certification.

Singh, et al., (2014) observed that pro-environmental actions of firms are influenced by internal (employees and holder ship) and external (suppliers and buyers) pressures. In context to Indian firms, external pressures are not as influential as internal pressures. This study tried to explore whether the size of hotels significantly influencing the pro-environmental attitude of employees. The majority of hotels in the survey state Punjab belong to small and medium size category and hardly employing any formal environmental policy. In this study, the same theoretical concept was investigated to find out, whether the small size of the hotels is controlling the environmental responsibility of the hoteliers.

Category of Hotel

In a study of hotels in Edinburgh (Kirk, 1998) reported that the managers of larger hotels (chain affiliated hotels having classification between three to five star) were more positive towards the paybacks of implementing ESPs in their organizations and were implementing more pro-environmental actions in comparison to the smaller hotels (independent and less than two star hotels).

In consistent (Bohdanowicz, 2005; Tsai, 2014) found more positive environmental attitude in the employees of upscale hotels. Similarly (Saenyanupap, 2011) conducted his study in Phuket, Thailand to find out the hotel managers' attitude regarding environmental sustainable practices based upon the hotel type. The hotels were categorized as "up-scale," "mid -priced," and "budget," hotels. This study reported more positive environmental attitude in the respondents of up-scale hotels in comparison to budget and mid- priced hotels. The ANOVA analysis of this study showed that respondents from up-scale hotels were more agree for the social obligations in comparison to respondent from budget and mid-priced hotels. The study also reported that respondents from mid-priced and up-scale hotels were more positive for sustainability plan and policy than budget hotels. In conclusion, the study of (Saenyanupap, 2011) in Phuket, hotel industry found that mid-priced and up-scale hotels pay extra attention to ESPs in comparison to small hotel organizations. These categories (up-scale and mid- priced) were having almost same type of environmental policies opposed to small hotels.

Ownership of the Hotel

The study of Canadian hoteliers and their attitudes towards environmental issues by (Deng, et al., 1992) reported that if a hotel belongs to a group or chain; it may have broader view checks for all concerned hotels as these hotels having the experience of working in different geographical locations facing different internal and external situations. They further stated that such hotels adopt environmental sustainability as part of organizational policies and similar qualities are not present in independently maintained hotels as they are limited to one or few properties. An attitude study was conducted by (Bohdanowicz & Martinac, 2003; 2005) on managers of chain hotels in Europe. They observed very positive attitude in managers regarding the

environmental protection and these managers also realized the importance of environment for the growth and sustainability of tourism activities. The managers of chain affiliated hotels were more responsive towards environmental problems in comparison to small or independent organizations. This study also highlighted adverse influence of hotel industry on the surrounding environment and the potential of chain and large hotels in mitigating this effect on the environment and promoting the concept of sustainability. In addition (Bohdanowicz & Martinac, 2003) also reported a direct relation among the level of managerial environmental knowledge and the environmental sustainable actions taken by the chain hotels in the direction of adopting and implementing the environmental strategies and programs. Similarly (Rashid, et al., 2004) stated in their studies that some specific type of organizational culture could accept change more easily in comparison to other organizations. In addition to this (Saenyanupap, 2011) stated that chain hotels are more concerned about environmental sustainable actions as these hotels are more worried about market value and negative environmental impact of their concerned hotel. In addition to this, chain hotels have more formal environmental strategy and environmental policy in comparison to small hotels (Saenyanupap, 2011).

Tariff/Financial position of the hotel

This study tries to find out the Punjab hoteliers' attitudes towards environmental sustainability. It was hypothesized that with the more income, it becomes easier to hire professional help and implement the environmental sustainable actions in the firm and subsequently availability of financial resources would positively affect the managerial environmental attitudes.

Deng, et al. (1992) stated that profitability will be supportive to environmental protection initiatives. In consistent (Scott & Willits, 1994) observed that there is significantly important relationship among income, environmental attitudes and environmental actions. Environmental sustainability was often considered as costly product and the people feel to free to work for environmental issues if their money-oriented needs are well fulfilled.

In hotels, tariff is associated with revenue to company and it is assumed that if enough financial resources are available with managers, they might have more positive

environmental attitude as implementation of ESPs are associated with high implementation cost. In a study of factors behind the pro-environmental behavior (Chen, et al., 2011) found income as critical factor. In consistent (Saenyanupap, 2011) in the study of hoteliers' attitude observed that respondents with high income possessed more positive environmental attitudes in comparison to respondents from lower income group. Similarly, (Kelly, 2012) found significant relationship between sociodemographic profile income and environmental attitudes.

In conclusion, it is found in many previous studies (Bohdanowicz, 2006; Mensah, 2007; Tsai, 2014) that attitudes of hotel managers are influenced by affiliation, size of the organization, geographical location, customer demand etc.

In this study, an assessment was done assuming that managerial environmental attitudes under different characteristics of hotels vary. In larger, higher classified, internationally affiliated hotels with more tariff rates where availability of financial resources, awareness of the concept is more, the managerial environmental attitudes are expected to be higher. The motive of this research study was to examine the empirical findings of earlier studies in relation to the Punjab state. Thus, an effort was made to examine the managerial environmental attitudes based on the different characteristics of hotels (Number of rooms, Type of ownership, Category and Tariff of the hotels) among the Punjab hotel industry.

To support this research question, hypotheses were developed for exploring managerial environmental attitude keeping in view the above-mentioned characteristics of hotels (hypotheses are explained in chapter 3).

Research Question 3

Is there any relationship between managerial environmental attitude and the number of environmental sustainable practices implemented in their hotels?

The analysis of relationship between managerial environmental attitude and the number of ESPs is based on the result of many previous studies that found that the rate of implementation of ESPs was not merely influenced by organizational level and characteristics but also by the managerial environmental beliefs and concern. These findings are consistent with the theories that highlighted the importance of

relationship of key personnel that are holding environmental friendly attitudes and the efforts of their organizations to move towards the sustainability (Gladwin, et al., 1995; Starik & Rands, 1995). Empirical results show that eco-positive managers may play an important role in organizational green program. According to (Anderson and Bateman 2000) strong environmental standard can play a vital role in a firm's decision of going green. In another study (Madden, et al., 1992; Cordano & Frieze, 2000) have identified managerial attitude as significant determinant factor behind the actions of firms for reducing natural resource consumption.

Laroche, et al. (2001) observed that attitudes generally predict the green actions. Similarly (Dewhurst & Thomas, 2003; Bohdanowicz, 2005) found in their studies that hoteliers environmental attitude, knowledge regarding the benefits of implementing ESPs and characteristics of the organizations like size, geographical location of the company, financial position decides environmental concerns of the employees and willingness to act according to these concerns. In consistent (Ayuso, 2006) stated that even if the top management have little knowledge of organizational involvement in environmental sustainability, hotels are applying voluntary ESPs because of customers' and managerial pro-environmental attitudes.

Many previous studies (Céspedes-Lorente, et al., 2003; Best & Thapa, 2013; Hall, et al., 2016) have also proved the positive relationship between hoteliers' environmental attitude and level of implementation of ESPs in the organization. In consistent to the results of previous studies, (Park, et al., 2014) observed in their study that more positive managerial environmental attitudes regarding green practices are associated with greater involvement in environmental sustainable actions in concerned organizations.

But there is some gap also as (Shi, et al., 2008) found that even if the managers have positive environmental attitude towards environmental sustainability, they do not adopt and implement the ESPs in their organizations as they are unwilling to change the conventional operational methods. Some other research studies have detected no association between the environmental attitude and actual environmental sustainable actions (Gamba & Oskamp, 1994; Merritt, 1998).

However, according to the results of major earlier studies, it is established that the level of environmental commitments varies among different organizations because of different eco-friendly concerns held by their managers. Understanding of the managerial environmental concern can provide vital information for the adoption and expansion of ESPs (Bansal & Roth, 2000; Banerjee, et al., 2003).

Hence, this research also tried to explore this relationship of managerial environmental attitudes and implementation of ESPs in context to hotels in Punjab state (hypothesis is explained in chapter 3).

Research Question 4

What are the motivational factors behind the implementation of environmental sustainable practices?

Motivational factors include incentives, special tax exemption, provision of soft loans, establishment of regulations, reduced cost, financial gains and support from top management (Massoud, et al., 2009; Chong, et al., 2009; Kasim, 2009). Direct financial gains are found most motivational for hospitality industry followed by demand from customer and improved hotel image by (Bohdanowicz, 2005; Park, 2009). The studies of (Foster, et al., 2000; Tzschentke, et al., 2008) observed that environmentally concerned customers prefer to stay at green hotels in comparison to other hotels and this demand proves a great motivational factor for service providers to go green. Graci & Dodds (2008) also found that customers are prepared to pay more the environmental sustainable related actions of hotels. According to (Chan & Ho, 2006) the environmental awareness and demand of customers have significant influence on adoption and implementation of ESPs in an organization. The strong demand of hotel guests for environmental sustainability will pressurize the managers

to incorporate environmental sustainable initiatives in operations to attract those guests. Chen (2012) stated in their study that according to hotel managers the formulation of environmental policy is an easy task but the governments' guidance, consultation and reward is much more needed to properly implement the system. Employees need to be trained and rewarded for their contribution towards implementing ESPs in the organization. Government authorities play important role in simplifying the environmental actions of organizations by means of environmental policy formulation, legislation, incentives and enforcement of regulations. In such situations, hotel firms will be under pressure to meet the legislation requirement of government (Bohdanowicz, 2006).

Based on the literature review following motivational factors were identified for this study; environment sustainability, legislation, government incentive, reduced operational cost, demand of customer, improved public image, an edge over competitor, improved relation with community, increased employee satisfaction, increased market share, personal awareness of hotel manager, quality service in clean environment, top management support.

All of these factors were examined from the viewpoint of hoteliers in the context of Punjab state.

Research Question 5

What are the barriers in implementing the environmental sustainable practices in hotel industry of Punjab?

This study tried to discover the aspects that negatively affect the implementation of ESPs among the hotels in Punjab. Previous researchers have classified these factors as external & internal in accordance to the implementation of ESPs (Baumast, 1997; Hillary, 1998).They recognized variables of barriers as deficiency of knowledge of concept, deficiency of pro-environmental attitude, deficiency of experienced human resource, initial high implementation cost, lack of customer demand for green services, employees' resistant to change, weak legislation and the complicated process and cost of green accreditation.

According to (Hillary, 1998) the deficiency of knowledge of environmental issues and policies in association with lack of information and backing from government and management are major hurdle in implementation of ESPs, mainly in small and medium sized organizations. In addition (Bergin, 2010) in his study recommended introducing the environmental sustainable knowledge in the curriculum of hospitality management courses to improve the knowledge of professional employees. Graci & Dodds (2008) stated in her study that hotels being different in size and category, the cases of going green are not readily shared among the industry. Further, she stressed the need of sharing the information of environmental issues and best environmental practices among different category of hotels.

Brown (1996) observed that managerial environmental attitude plays a significant role in implementing ESPs in organizations. Further, researcher found that some managers do agree that hotels have negative effects on environment but agrees to implement ESPs only if there are significant costs saving benefits associated with implementation.

The research studies of (Jauhari & Manaktola, 2007; Chan, et al., 2014) reported that the environmental awareness and knowledge, a positive environmental attitude and concern significantly influence all action of employees towards environment like energy saving, water conservation, solid waste minimization, local purchasing etc.

In a study of best hotel environmental practices, (Enz & Siguaw, 1999) stated that separate positions should be created for environmental management in hotels in direction to properly implement the program. In consistent (Leondakis, 2009) recommends for proper training and communication of staff. Graci & Dodds (2008) recommended a top to down approach of legislation and need to shift the mentality of hotel managers and make them realize that practical and cost effective measures of hotels can too reduce the impact on environment, which can attract many benefits in future.

High initial implementation cost of ESPs was found a major barrier in implementing the ESPs in hotels in addition to existing non supportive building structure (that makes difficult to implement the ESPs because of need of major infrastructural

changes) by (McNamara & Gibson, 2008). In addition (Micioni, 2009) reported that this initial high implementation cost provides financial benefits in long run. He suggests to start with small changes initially and gradually incorporate larger changes. He further stated that these changes should be incorporated to make the environment better at the destination where the hotels exist. Hotels also face barriers like lack of engineers, vendors, housekeepers, landscapers and managers who are familiar with the green concept.

Another major barrier in going green is the lack of demand from customer side. Butler (2008) reported that customer demand for green services can directly influence the hoteliers' intention to go green. Most of the customers are not conscious about the green initiatives of hotels in which they are staying in (Han, et al., 2010).Many customers' associate green hotels with lack of luxury services. Green initiative of linen reuse is often linked to cost cutting tool of concerned organizations and affect guest's experience and they might select to stay in another hotel next time. The study of environmental management in hotels and customers' attitude towards these green practices by (Kirk, 1995; Jauhari & Manaktola, 2007) reported that hotel organizations afraid to implement these practices as they believe that the initial high operational cost could not be charged from customers, as they are not prepared to spend additional money for ESPs.

Massoud, et al. (2009) in his study states that the main barrier behind the implementation of ESPs is absence of government support and stakeholders demand. The other reason is that ISO 14001 and other such accreditations are not a legal requirement to run a hotel.

Keeping in view the previous literature review, the following different variable under the head of barriers has been identified:

Weak legislation, unsuccessful and/or failure to implement the laws; corruption; poor observation; initial implementation cost; unclear and/or irrelevant economic gain; slow return on investment; low top management commitment; existing non supportive structure; guests are uncooperative; lack of professional help; lack of awareness of

concept; complicated certification process; limited green technology; little guest concern; change of routines and management style; high cost of certification.

These variables have been explored from the perspective of managers.

1.7. The Survey State in Context

This section provides the general introduction about the contribution of tourism to the economy of India and Punjab, so that the importance of sustaining both the tourism as well as destination can be justified.

There are two main subsections; section 1.7.1 provide brief description of tourism in reference to India and includes economic importance of tourism, types of tourism, and key statics of tourism in 2017.

Section 1.7.2 provide brief description of tourism in reference to Punjab and incudes economic importance of tourism, famous tourist places, most visited cities and district wise tourist arrival in the state.

1.7.1. Tourism Profile of India

India is situated in South Asia and also known as Republic of India. It is the seventh main country of world in relation of area. It is the second extreme populated country of the world with approximately 1.3 billion populations. Its southern border is surrounded by Arabian Sea, Bay of Bengal and Indian Ocean. India shares its border with Pakistan, China, Bhutan, Nepal, Bangladesh and Burma. The Indian currency is Indian Rupee and estimated GDP of country is 1.947 trillion in dollars. India is vast and diverse in culture, attracting different types of tourists here.

In India, there is different type of tourism prevalent like;

Leisure tourism: it is the relax tourism and includes visiting places of interest, relaxing, walking and shopping.

Business tourism: it includes trading of goods, attending conferences, meeting, exhibitions, and visiting the clients etc.

Ecological tourism: this type of tourism is famous among the nature lovers. The vast treasure of fauna and flora attracts large number of tourists to India every year.

Medical Tourism: excellent medical facilities at low cost attract large number of tourist to India for medical treatment.

Pilgrimage Tourism: domestic and international tourists know India as land of Gods and Goddess and offer variety of pilgrimage tourist places like Amarnath, Badrinath, Kedarnath, Dwarka, Golden Temple at Amritsar, Churches of Goa, Masjids & Dargahs at Delhi and Ajmer.

Historical Tourism: Indian history is rich by many legendary rulers and warriors. Most of places in India have a historic background. The famous historical attraction in India includes Taj Mahal at Agra (also included in seven wonders of world), Ajanta Ellora and Khajuraho Caves, forts of Delhi, Jaipur and Maharashtra, Kutub-Minar of Delhi etc.

Yoga and Ayurveda Tourism-Kerala in south is the famous destination among domestic and foreign tourists for yoga and ayurvedic therapies. There are many places in Kerala with residential facilities among nature, offering Ayurveda tourism. Yoga centers are mainly located in north east, mountain ranges of Rishikesh, Gangotri, Himalaya, Kedarnath etc.

Adventure and Sports Tourism-river rafting, wind rafting, mountain climbing, tracking attract large number of tourists to India. Organization of international sports activity also boosts short-term tourism to country.

Wildlife Tourism-there is great number of tourists who visit a place to see the non-domestic animals in the natural environment. They observe the activities of animals. India has large number of National Parks, Wildlife Centuries and Zoological Gardens to cater such type of tourists.

Tourism/Hospitality Sector Contribution in the Economy of India

Hotels are one of most important component of tourism sector and provide lodging and food & beverage facility to all types of tourist mentioned above. India currently

has over 200,000 hotel rooms spread across different hotel types and alternative accommodation and still facing a shortage of over 100,000 rooms (Chiranjeevi, 2013).There is huge difference between demand and supply of guest rooms in India especially in mid segment category of hotels. According to a report of (India Brand Equity Foundation, 2018) International tourist comings in India is expected to touch 30.5 million by 2028, while earnings from medical tourism is expected to touch US$ 9 billion by 2020.

Gross Domestic Product (GDP) - According to World Travel & Tourism Council (WTTC) and (India Brand Equity Foundation, 2018) India stands at 7th place on worldwide level in the terms of travel & tourism input to country's GDP by contributing 15.24 lakh crore in Indian currency in 2017 (9.4% in the total GDP).

Jobs - The travel and tourism sectors provided 41.622 million jobs that are 8% of total employment in 2017 leading country to second position on the worldwide level in terms of employment generation done by this sector. This number is estimated to rise at 2 percent per annum until 2028 and providing 52.3 million jobs in the same year (India Brand Equity Foundation, 2018) . Travel and tourism sectors were growing at the fastest speed (8.5% during 2016) in India as compared to all G20 countries.

Foreign Exchange Earnings (FEEs) - Tourism is at the third position in terms of Foreign Exchange Earning (FEE) after gems/ jewelry and readymade garments. FEEs from tourism business was US$ 21.071 Billion in the year2015, as compared to US$ 20.236 Billion in the year of 2014, displaying a growth of 4.1% in Indian Rupee terms. In 2017, FFE from tourism reached at US$27.310 billion (India Brand Equity Foundation, 2018) .

Tourism contributes directly as well as indirectly to the economy of our country. Direct contribution includes economic benefits to hoteliers, transporters, souvenir shops, recreational activity providers while indirect benefits includes infrastructure development at destinations, increased spending power of people that are employed in tourism and travel sectors, increased level of sale of local commodities. According to

(Nath, 2014) statistical figures of tourism clearly specifies the economic significance of the sector and the other fact is that the maximum of the country's tourism potential is still unused.

Tourism is among the fastest developing business in the world. It has vast prospective for creating employment and attracting huge amount of foreign exchange. Tourism adds billions of dollars to the overall economy of India every year. This contribution is increasing day by day corresponding to increased international and domestic tourism in the country.

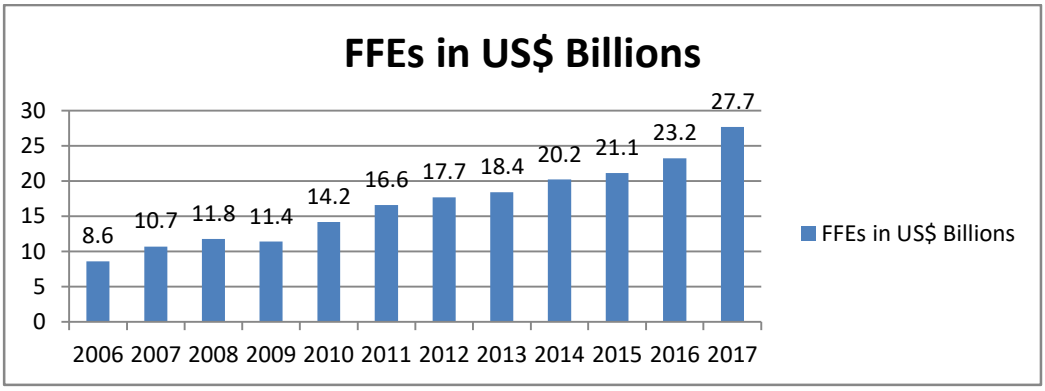
According to (Market Research and Statistics, 2018) , the following key statics of tourism define the overall overview of economic importance of tourism to our country.

Key Statics of Tourism in 2017 with Annual Growth Rate (Market Research and Statistics, 2018)

Overseas Tourist arrival in India	10.04 Million
Growth Rate	14%
Number of Indian national outbound departure	23.94 Million
Growth Rate	9.5%
Number of domestic tourist visit within India	1652.49 Million
Growth Rate	2.3%
FEEs from tourism in INR	Rs.177874 Crore
Growth Rate	15.4%

Source: India Tourism Statics 2018 (Market Research and Statistics, 2018)

Figure 1: FEEs from inbound tourism in India between 2006-2017 (US$ Billion)



Source: Ministry of Tourism, (Market Research and Statistics, 2018)

As explained above the potential of tourism and hospitality sector is beyond measures. Government of India has established Ministry of Tourism for promoting this sector on national and international level. Ministry of Tourism has introduced many promotional campaigns for the promotion of tourism e.g. Visa on Arrival (VOA) which is renamed as Electronic Travel Authorization, short term medical visas, Athithi Devo Bhava, Incredible India, Indian Heritage etc., Government has given nod to 100% Foreign Direct Investment (FDI) for the development of hotels, resorts, recreational activities and tourism projects. According to (Press Trust of India, 2018) tourism industry got 2150 crore-budget grant in 2018-19.

Tourism business in India is economically vital for the development of nation and increasing at very fast speed. According to WTTC India ranks at third position among countries where tourism is estimated to grow at fastest speed in the coming years.

1.7.2. Tourism Profile of Punjab

Punjab is situated in northwestern India consisting 50,362 square kilometers of area. Punjab is bounded by Pakistan on West, Himachal Pradesh on Northeast, Jammu and Kashmir on the North and Haryana and Rajasthan on the South border.

Punjab is the 16th largest state of India in term of land area and 15th in relations of population. The name of Punjab is made of two words Punj (five) + Aab (rivers) i.e. state of five rivers. These five rivers of Punjab include Ravi, Beas, Satluj, Chinab and Jhelum. At present Chinab and Jhelum flows in Pakistan. Punjab state is distributed into three regions: Doaba, Majha and Malwa. There are 22 districts and 237

townships in Punjab. There are five Major cities in Punjab; Amritsar, Jalandhar, Ludhiana, Mohali and Patiala. The state of Punjab is well known for its Sikh religious history, culture and cuisine.

Punjab provides a great variety of tourist attraction like being the land of Sikh Gurus there are many world famous Gurudwaras, along with many heritage sites, monuments, wet lands to cater each type of tourists. Punjab is also famous for woodcraft, handicraft, fine needlework, hosiery and sports items, which are sought after by international and domestic tourists.

Being the land of gurus Punjab is having many world famous Gurudwaras like Golden Temple and Akal Takht in Amritsar, Talwandi Saboo (Bhatinda), Damdama Sahib (Kiratpur Sahib), Gurudwara Dera Baba Nanak (Gurdaspur), Manji Sahib (Ludhiana), Nanaksar Sahib (Jagroan), Anandpur Sahib (Anandpur Sahib), Dukhniwaran Sahib (Patiala), Gurudwara Fatehgarh Sahib (Fatehgarh Sahib) etc.

Famous Temples include Ram Tirath (Amritsar), Kali Devi Temple (Patiala), Jain Temple (Ferozepur), Devi Talab and Sodal Temple (Jalandhar), Cave Temple (Gurdaspur), Durgiana Temple (Amritsar).

Famous Mosque includes Jama Masjid (Jalandhar), Rauza Sharif (Sirhind), Chilla Baba Sheikh Farid (Faridkot), Moorish Mosque (Kapurthala), Quadian (Gurdaspur), Akbari Masjid (Gurdaspur), Idgah (Malerkotla), Mughal Sarai (Ludhiana), Imam Nasir Mausoleum (Jalandhar).

Other pilgrimage places are Radha Swami Dera (Beas), Swetamber Jain Temple (Ferozepur) and Saint Paul Church (Amritsar).

Punjab also has large number of historical, heritage and archeological sites. The famous museum of state includes Sanghol Museum (Fatehgarh Sahib), Maharaja Ranjit Singh Museum (Amritsar), Government Museum (Hoshiarpur), Sikh War Museum (Ferozepur), Rural Museum (Punjab Agriculture University, Ludhiana), Art Gallery (Sheeshmahal, Patiala), National Institute of Sports (Patiala), Central Sikh Museum (Amritsar), and Guru Teg Bahadur Museum (Ropar).

There are many famous forts in Punjab like Bahadurgarh Fort (Patiala), Phillaur Fort (Jalandhar), Shahpur Kandi Fort (Pathankot), Anandgarh Fort (Sri Anandpur Sahib), Gobindgarh Fort (Amritsar), Qila Mubarak (Nabha), Faridkot Fort (Faridkot).

Punjab has freedom trails like Jallianwala Bagh (Amritsar), Kuka Memorial (Sangrur), Ropar Treaty Palace (Ropar), and Martyr's Memorial Hussain Wala (Jalandhar).

Punjab is having three wetlands in state; Hari-ke Pattan that is located between Ferozepur and Amritsar.Kanjli Wetland in Kapurthala, Ropar wetland in Ropar district. Two more sites have been declared as National wetland; Nangal wetland on the banks of Sutlej River and Keshopur wetland in Gurdaspur district.

Punjab also has some Leisure and eco -tourism sites like Bansar Garden in Sangrur, Ram Bagh Garden, and Aam Khas Bagh (Sirhind), Baradari Garden in Patiala.

Most Visited Cities of Punjab

Amritsar

Amritsar is on the first place in the state in context to tourist arrivals and receives almost half of total tourist who visits in the state. In 2017, Amritsar received 25978495 tourists. According to (Sharma, 2017), around 70000-80000 people daily visit the golden temple and the number goes up to 1.5 lack during weekends. The overall daily tourist arrival in the city is approximately one lakh in which almost 50000 people stay back. The famous tourist places of Amritsar include: Maharaja Ranjit Singh Museum, Jallianwala Bagh, Durgiana Temple and Wagah border. Wagah is most visited tourist attraction after Golden Temple in the city. Wagah is a village situated on Grand Trunk Road spreading between the Amritsar, Punjab, India and Lahore, Punjab, Pakistan, near India and Pakistan borderline with the provision of railway station and goods transit terminal. This is the one and only opens area between India and Pakistan. Wagah is famous for the retreat ceremony that is celebrated each day before the sunset. It is change of guard and lowering of flag ceremony conducted by Border Security Forces of India and Pakistan Rangers.

Ludhiana

It is second in list after Amritsar in relation of tourist receiving and received 5453147 tourists in 2017.Ludhiana is an industrial city and famous for hosiery and woolen goods. Ludhiana is also famous as the Manchester of India. It also claims Punjab Agriculture University that organizes Kisan-Mela every year and presents the picture of rural life of Punjab by displaying pottery, traditional cloths and musical instruments of the region. Maharaja Ranjit Singh war Museum showcases the renowned history of Punjabi Military. Nehru Rose garden have more than one thousands of rose kinds.

Mohali

Sahibzada Ajit Singh Nagar (SAS Nagar) is also known as Mohali situated on the outskirts of Capital of Punjab, Chandigarh (Union Territory). Mohali received 3177663 tourists in 2017 and achieved third position in the state in terms of tourist arrival. The most visited places in Mohali include Punjab Cricket Association Stadium, War Memorial of Baba Banda Singh Bahadur and Fateh Burj.

Jalandhar

This city is famous for sports goods and world class medical facilities. Jalandhar received total 2134073 tourists in 2017 and remained on 4^{th} place in term of tourist receiving in the state. Tourist spots in Jalandhar include Devi Talab Temple (it is centuries old Hindu Temple dedicated to Goddess Durga), Gurudwara Sahib of Chhevin Patshahi, Wonderland (famous amusement park), Pushpa Gujral Science City, and Jung-e Azadi Memorial etc. Jalandhar is also an army cantonment and major rail and road junction.

Table2: District Wise Tourist Arrival in Punjab (January-December 2017)

District	Domestic Tourist Visit	Foreign Tourist Visit	Total
Amritsar	25028226	950269	25978495
Barnala	79924	2	79926

Bathinda	1261933	812	1262745
Faridkot	38532	0	38532
Fatehgarh Sahib	53258	187	53445
Fazilka	208042	112	208154
Ferozepur	54808	72	54880
Gurdaspur	53516	250	53766
Hoshiarpur	168386	252	168638
Jalandhar	2065968	68105	2134073
Kapurthala	22300	2035	24335
Ludhiana	5414458	38689	5453147
Mansa	87683	667	88350
Moga	109003	0	109003
Pathankot	1133619	877	1134496
Patiala	759159	11554	770713
Roop Nagar	340069	4604	344673
S.A.S Nagar	3149066	28597	3177663
S.B.S Nagar	70498	1472	71970
Sangrur	70332	0	70332
Sri Muktsar Sahib	110728	37	110765
Tarn-Taran	13844	42	13886
Total	**40293352**	**1108635**	**41401987**

Source: Punjab Tourism (Punjab Tourism, 2018)

1.7.3. Reasons of Selecting Punjab State for this Study

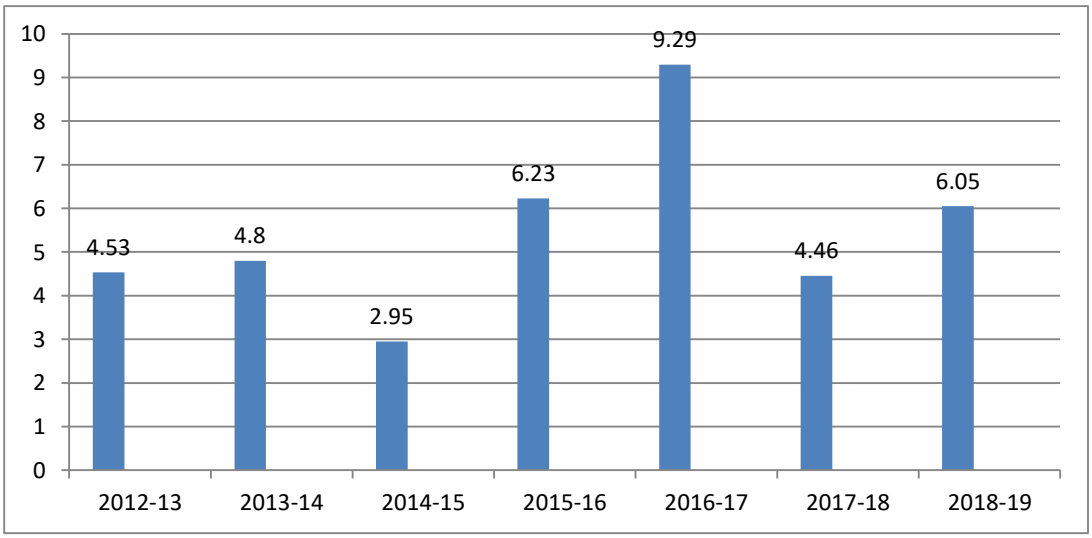
In this study, Punjab was preferred as sample state for the below mentioned reasons;

First, Punjab is a major tourism destination for business and pilgrimage tourists.

Second, majority of hotel in Punjab belongs to mediums and small category and owned and managed by local chains and individuals, which implies that manager have considerable freedom to run these organizations in their own ways as compared to large, chain hotels where environmental policies and actions are planned and passed on to all franchise organizations from the corporate head offices. In case, where hotels are operating under local chains and individual ownership, the effect of initiatives that have been taken on worldwide level are rarely seen at initial stages. The adoption and implementation of new policies like environmental sustainable actions strongly depends upon the managerial attitude, knowledge, willingness of act and financial assets of the business.

Third, the economic interest of the Punjab state, that drive and control the growth of hospitality industry in the region.

Figure 2: Hotels and Restaurant Growth Rate in Punjab



Source: Economics and Statistical Organization, Punjab (http://esopb.gov.in/Static/PDF/GSDP/Level/PunjabvsIndia.pdf)

There are estimated 274374 hotels and restaurant in Punjab (Economic & Statistical Organization Goverment, 2019) and their collective impact on environment made significant damage to surroundings. The hotel industry of Punjab is facing tremendous growth due to increased tourism in the area. Hotel sector is the most vital divisions of

tourism and travel business and its expansion cannot be suggested to be under control due to multiple benefits associated with the industry. On the other hand, its negative impact on environment cannot be ignored. Tourism growth and resource consumption is infinite while natural resources and environment is finite. Global warming, weakening of ozone layer, decrease in natural assets, air pollution etc. all pointing a threat to natural environment. Now adopting ESPs is no more an option but an obligation to sustain the environment and to get the benefits of tourism business. Tourism industry is mainly dependent on natural attraction of destination. Environmental conservation is important to sustain the tourism and its economic benefits. ESPs are tool for hoteliers to mediate their negative affect on surroundings.

Orchid Hotel in Mumbai, India was the first certified ecotel hotel of Asia in 1997 with eco- friendly construction, rainwater harvesting, and drip irrigated gardening, roof top swimming pool etc. Now this concept is growing and there are many green and ecotel hotels in different states of India. These hotels enjoy great benefits by going green like improved corporate image, financial gains, increased business, positive social image etc.

Despite increasing popularity of environmental sustainable hotels, the application of ESPs is almost negligible in the hotel organizations of Punjab, India. There is limited information available about the ESPs in the hotel industry of Punjab. At present, there are fragmented policies, implementation and guidelines regarding green management in region.

This study about Punjab is important, as most of the hotels in the region are profit-generating center paying little attention to adverse influence of their hotels businesses on environment and the general public. Especially the managers of small hotels do not take sustainability as an essential issue as they consider that small hotels do not harm the surroundings (Mensah I. &. 2014).

In conclusion, the reasons for selecting Punjab for this study are many like;

- It is famous religious and business tourist destination for both the international and domestic tourists attracting huge amount of tourists annually;

- Service sector pays significant contribution in the Punjab economy;
- The sub sector of tourism are hotels, restaurants, recreation and attraction facilities and there are estimated 274374 hotels and restaurant in Punjab (Economic & Statistical Organization Goverment, 2019);
- The tourist arrival in the state increasing by each passing year, in 2017 international tourist arrival in Punjab was 1108635 ,leading state to 7th place in top ten states of India in number of foreign tourist visit (Market Research and Statistics, 2018);
- Many new hotel properties are coming up in state to meet the demand of increased tourism; Hotels are avoiding the approval/certification from agencies like Hotel and Restaurant Approval and Classification Committee (HRACC India), which requires specific actions to sustain the environment (there are only eight classified hotels in the state that are approved by HRACC as on 10th March 2019);
- The environmental conditions in the state are deteriorating badly;
- Little number of environmental studies are done in the region;
- There is no green certified hotel in region, only Cabbana Resorts & Spa is a certified hotel from ecotel India.

This research was focused on Punjab as this state is extreme behind in adopting the green concept in lodging industry and having only a single certified ecotel hotel (Cabbana Resorts & Spa Phagwara). Many new projects are going to be operational in short span of time (2-3 years) leading to increased human activities and carbon footprints in the area.

Goodall (1997) said that it's quite essential to consider environmental aspects at planning and development phases of tourism but a gap is prevalent at theory and actual implementation process. Tourism business is facing the problem of expertise advice and guidance in implementation of ESPs. It is important to study ESPs of hotel industry as it is not only linked to environmental concern but also closely associated with economic benefits and social benefits (Stipanuk, 2001).

According to (Kirk, 1995) hospitality industry carries out numerous small operations with the significant intake of energy, water and other natural assets which barely harm environment individually but collectively all these small operations have significant effect on environment. Scholars have focused their environmental research studies mainly upon manufacturing industries; little concern has been paid to the environmental initiatives of hospitality industry (Ayuso, 2006).

There is no study available that explored the managerial environmental attitude and its relationship with the ESPs of the hotel businesses of Punjab. The exploration of managerial environmental attitude and ESPs based on the characteristics of the hotels in the context of Punjab also remained totally untouched by researchers.

To fill this gap, the difference of managerial environmental attitude and ESPs were studied based on tariff of hotel, number of rooms of hotel, category of hotel and type of ownership of hotels. Keeping in view the main objective of the study, I have also studied the relationship among managerial environmental attitude and implementation of ESPs among the hotel businesses of Punjab. I also measured the barriers and motivational factors behind the implementation of ESPs.

The finding of this study can deliver valuable information for existing and upcoming hotels projects in the state as well as for Punjab Heritage & Tourism Promotion Board for their future action plan on the green concept in hospitality industry.

1.7.4. Present Environmental Condition in Punjab

Report of (CRGGS, 2015) stated that there is a urgent requirement to balance development objective of tourism with environmental conservation and this report further demanded the same green growth among the hotel industry of Punjab. This state is all set to enter the group of states in the country, which are having an array of luxury properties in hospitality. Middleton & Hawkins (1998) as cited by (Mensah, 2007) reported that the size of hotel industry also influences the environmental impact. Report by (Sarraf, et al., 2014) shows clear positive correlation between total numbers of rooms, higher star rated hotel and energy consumption of organization, for

example, a high rated hotel with 600 room organization will have different impact on surroundings in comparison to a 100 room organization.

As this research study is primarily focused on hoteliers' environmental initiatives related to conservation of energy and water and waste managing aspects of sustainability, the current environmental conditions of Punjab would be discussed below for the same aspects i.e. energy, water and waste

Energy

According to (Press Trust of India, 2013), Punjab is lagging behind in eliminating the difference between actual consumption and generation of energy but the energy-deprived state hold top position in per capita energy intake in India. (Press Trust of India, 2013) further reported the per capita energy intake in Punjab as 1,506.3 kWh followed by Gujarat at 1,330.8 kWh. As stated by (Chaba, 2013), around four years back, power-deprived Punjab had wanted to meet its energy requirement from green energy and accordingly the state government declared that state would generate around 1000 MW of energy supply from renewable energy resources. These plans of state government vanished with time as renewable energy sources like biogas; solar power; small- hydel projects; wind power at present giving just 577 MW of energy to the state (Chaba, 2013).

Ground Water

The most recent calculation of the country's dynamic groundwater assets, performed by Central Ground Water Board (CGWB) as cited in (Mohan, 2016), shows that some states like Punjab, Haryana, Delhi and Rajasthan are consuming abundant amount of groundwater that is beyond the limit of rechargeable limit every year and facing severe water shortage. According to (Punjab Pollution Control Board, 2013-14), 80% of geographical area of state (110 Blocks out of 138 blocks) is overexploited. It is expected that by 2023 the water level deepness in central Punjab is estimated to drop below 130 feet in 6% area, below 100 feet in 34% area and below 70 feet in rest 60% area.

Solid Waste Production

According to a report of (Punjab Pollution Control Board, 2013-14), Punjab is producing huge amount of solid waste. The total quantity of solid waste that is collected from 22 districts includes 1486128 MT of Municipal Waste (Punjab Pollution Control Board, 2013). Ludhiana is on number one position with the production of 391389 metric ton waste annually with 0% treatment facility. Amritsar produced 239075 metric tons with 0% treatment while Jalandhar produced 212437 metric tons with 11108 metric ton treated.

According a report of (Pandey, 2015), the solid waste production in Punjab is expected to increase by 128% by 2014

After discussing the present scenario of state in relation to energy & water consumption and production of solid waste, the following table shows, how hotel operations worsen this situation (International Hotels Environment Initiatives, 1996);

Table 3: Impact of Hotels on Environment

INPUTS	OUTPUTS
Energy in the form of electricity, fuel (used for cooking, transportation etc.).	In addition to energy shortage at destination, increased carbon footprint in the atmosphere like carbon dioxide, nitrogen oxide, hydrocarbon, methane etc., that raises global temperature and energy cost.
Water for drinking, cleaning, swimming pools, guest-rooms, spas, gardening, laundry etc.	In addition to water scarcity huge amount of contaminated water discharged e.g. grey & black water from washrooms. Chlorine, detergent & phosphates are discharged from swimming pools, laundry.
Furniture, fittings, consumables, food & beverage items	Waste packaging, plastic & glass bottles. Waste shampoo, conditioner, cleaning agents, detergents, aluminum cans, fertilizers, pesticides, fused CFLs, ink cartridge, paints etc.

Hotel industry remains in need and uses energy for 24 hours, irrespective of peak seasons, its category and location (Kasim, 2007).According to (Dascalaki & Balaras, 2004) the energy is used in hotels for many purposes like centralized or individual cooling and heating needs, hot water supply, ventilation for improved air quality, lightings, cooking and washing utensils in kitchens, laundry, recreation and many other uses. In a study, (Bohdanowicz & Zientara, 2008) observed that the huge intake

of energy resources by hotels subsequently releases injurious gases in the surrounding areas and produces air pollution. In consistent to the result of this study, (Gössling, 2002), added that the emission of harmful gases to atmosphere negatively affect biogeochemical cycles, release of carbon dioxide and global warming.

Hotels are large consumer of water and consumption of water varies according to number of rooms, type of services and facilities offered to guests (Bohdanowicz & Zientara, 2008).The consumption of water is at the high end in luxury hotels because of provision of leisure facilities to guests like swimming pools, spas, sauna, gardens and golf facilities etc. (Kasim, 2007). The study of (Alexander & Kennedy, 2002) observed that in a luxury hotel, the water consumption in a guest bathroom is 1499 liters of water that can otherwise fulfill the water requirement of 14 local people. Water consumption at such high rate will ultimately lead to water shortages at the destination.

Further (Alexander & Kennedy, 2002) reported different type of waste generated by hotels as food, paper, metals, glass and aluminum etc. According to (Kasim, 2007) hotels generate huge amount of waste as compared to waste generated by local houses. The earlier studies indicate that waste controlling is a critical matter for hotel industries. Hotels are unable to participate in costly waste management systems while local authorities are lacking in monitoring violations and application of laws.

1.7.5. Environmental Regulations –India and Punjab

Environmental Regulations India

This section discusses the environmental legislations in India in overall and Punjab in specific. The Ministry of Environment and Forest (MoEF) in India is entrusted for planning, organizing, controlling and implementing for various forestry and environmental programs. MoEF takes various actions related to stop and regulate the pollution, conservation of flora and fauna, conservation of environment etc. (Kumar, et al., 2014).

MoEF has created many acts for the protection and sustainability of natural environment. These acts are mentioned as below:

- The Water Prevention and Control of Pollution Act, 1974 (6 of 1974).
- The Water (Prevention and Control of Pollution) Cess Act, 1977 (36 of 1977).
- The Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).
- The Environmental (Protection) Act, 1986 (29 of 1986).
- The Public Liability Insurance Act, 1991 (6 of 1991).
- The National Environment Tribunal Act, 1995 (27 of 1995).
- The National Environment Appellate Authority Act, 1997(22 of 1997).

Source: (Kumar, et al., 2014)

The MoEF is bifurcated into following divisions to achieve environment related objectives:

- Environmental Information (EI).
- Environmental Impact Assessment (EIA).
- Environmental Education (EE).
- Control of Pollution (CP).
- Clean Technology.
- Environmental Research.
- Policy and Law.

Source: (Kumar, et al., 2014)

Environmental Regulations-Punjab

Punjab State Council for Science and Technology

The Punjab State Council for Science and Technology was formulated on 21 July 1983 for the achievement of following objectives:

- Regulate the Pollution in the state of Punjab.
- Conservation of Environment.
- Providing consultation to industries regarding activity of development.

This organization is trying to achieve above-mentioned objectives by developing new technologies, by providing formal and informal assistance to industries to carry out

their present activities in such a way to protect the natural resources, putting minimum stress on the environment. The organization is also working towards resolving the issues like, ground water depletion, conservation of eco system, water logging etc.

The institute has been divided into following divisions for the achievement of the objectives:

- Biotechnology
- Environment- this division helps the State Department of Environment, Government of Punjab in solving the practical issues related to environment, explaining the state government guidelines and strategies on environmental subjects, identification of key areas of environmental issues, coordinating and monitoring the environmental related schemes, promoting environmental awareness, training, education and research.
- Consultancy Cell
- Popularization of Science
- Punjab state Climate Change Knowledge Center
- Intellectual Property Rights

1.7.6. Punjab Government's Specific Policies to Make Tourism Environmental Friendly

Ecotourism policy of Punjab 2009

Punjab has great potential to develop ecotourism in the state because of having large Shivalik range of foothills and three large rivers flowing in the state. Ecotourism is associated with specific type of tourist who value the sustainability of environmental atmosphere and comfort of local people. Punjab State prepared the Ecotourism Policy (2009) keeping in view tourism growth in accordance to sustainability of environment, economy and social values. According to this policy, there are two types of eco tourist projects-ones that would be implemented by government directly and others by the private organizations.

The following ecotourism projects have been suggested to be developed in the state by the state government:

- Harike Pattan Wetland in Amritsar
- Ropar Wetland in Roop Nagar
- Kanjali Wetland in Kapurthala
- Chhatbir Zoological Park in Patiala

According to (Press Trust of India, 2015) Punjab Government sanctioned a plan to make 'Siswan' and adjoining forest areas situated on lower level of Shivalik range as a hub of ecotourism. Punjab government has notified both the government-run and private-run projects under this policy.

According to (Press Trust of India, 2015) Punjab government has submitted an eco-tourism project worth of 14 crore, proposing eco-development in different wetlands and protected areas to the Centre under Swadesh Darshan scheme.

According to (UNI, 2015) Punjab Government had received six applications for eco-tourism resort projects in Punjab, of which three projects have been approved ; Metro eco-green Resort, Pallanpur village, SAS Nagar; Kang's Nirvana Resorts and Spa, Kang Farms, Mahilpur-Una road, Hoshiarpur and Eco-Tourism Project, Siswan, SAS Nagar (Project of Greater Mohali Area Development Authority).

According to a report of (Pandey, 2015), Punjab government is planning to charge a fee called 'Polluter Pays Principle' by waste generators in which hotels above 21 rooms have to pay Rs.2000 per month.

Waste generated in Punjab has lots of scope of recycling as 13% part of total waste is of recyclable while 36-44% compostable material and 40-50% inert material (Punjab Pollution Control Board, 2013). Pandey (2015) stated that greening of waste has many environmental, economic and social benefits e.g. energy saving, new business and jobs, reduced GHG emission, improved health, less water contamination etc.

Punjab Tourism Policy 2018

According to Punjab Tourism Policy 2018, Government aims to attract high value tourism to state by sustainable and responsible development of sensitive areas and resources. The aim is to involve local people, development of small and medium sized entrepreneur of tourism, emphasis on creating local jobs and income, involvement of women and young generation, environment preservation and conservation.

Government is intent for sustainable development, cultural preservation and development of rural tourism, human resource and small business development.
Punjab recognized the importance of this trade (tourism) and considered it as industry in 2012.A revised Tourism Policy was introduced in 2015 giving special benefits to hoteliers including exemption of VAT. New hotels properties were exempted from luxury tax that is 40% as well as license fee.

Representing the State in India Tourism Mart-2018, Navjot Singh Sidhu (Punjab Tourism and Cultural Affairs Minister) said that Punjab Government is determined to increase the contribution of tourism to GDP of Punjab up to 20% (Accomodation Times, 2018).

1.8. Selection of Population for This Study

In India, hotels are approved and classified by Hotel and Restaurant Approval and Classification Committee (HRACC) on strict specifications and rules. However, unfortunately, it is voluntary for hotels to get approval or classification from HRACC. Most of the hotels give classification to themselves. In Punjab, only eight hotels are classified from HRACC. Even the Punjab Heritage and Tourism Promotion Board (PHTPB) do not have any consolidated list of hotels of the state.

The census of hotels for this research study was taken from the membership list of Hotel and Restaurant Association of North India (HRANI). All the hotels from one star to five-star deluxe category (total 49 hotels) from all over the Punjab has been taken to explore the managerial environmental attitude and ESPs of hotels. The reason for selecting only classified hotels was based on the results of previous studies and characteristics of exiting green certified hotels in India. According to previous findings, the upscale and large hotels are forerunner in adopting the green concept. In India also, mostly large hotels are involved in adopting the ESPs in their hotels.

In addition to this 39 addition hotels (having more than 10 rooms) were selected on convenience sample technique to collect the more response for generalizing the results more accurately.

Above categories of hotels, have different characteristics, dealing with different categories of customers and leaving different impact on the surroundings. So rather being specific to one category of hotel, this study tried to cover the different categories of hotels, so that a collective effort of hoteliers could be explored for the better understanding of the concept on state level.

1.9. Organization of Thesis

Chapter 1 Overview

This thesis comprises of five chapters. The first chapter discusses the research background, research gap, research problem, significance of study, research questions, survey state in context that is Punjab, and organization of thesis. This introductory chapter offers the importance of studying the ESPs and managerial environmental attitudes in the context of Punjab state.

Chapter 2 Literature Review

The second chapter is about the review of literature that provides observations of previous theoretical and experiential research on the meaning and dimension of ESPs, managerial environmental attitude, motivational factors and barriers. This chapter offers the details and background of the constructs involved in this study. This chapter also gives details about the impact of hotel businesses on the surrounding environment, present environmental conditions in the state and government's initiatives to sustain the conditions. The concept of environmental sustainability and benefits associated were also reported based on the findings of previous studies.

Chapter 3 Research Methodology

The third chapter explains the research methodology of this research study. This chapter shifts the emphasis from theoretical domain to operational domain with the explanation of different methods adopted for hypothesis testing in this study. This chapter clarifies the process of population selection, research frame, variable selection, construction of research questionnaire, testing of research questionnaire, research methodologies adopted for collection of data, actual data collection and

processing procedure. A quantitative approach was adopted with self-constructed questionnaire for the collection of responses. This chapter also explains the statistical methods applied to this study, details of reliability and validity of scale, main analysis, characteristics of sample and methods of dealing with response bias.

Chapter 4 Results

This chapter provides the detail results of analysis. This chapter provides the descriptive statistics of the responses based on the characteristics of hotels and demographic profile of respondents. This chapter presents result in relation to hypotheses and the research questions of this study.

Chapter 5 Discussion

This chapter discusses the key results of the main five objectives of the study. This chapter completes the study, through discussions of the results, managerial implications of the study, limitation and suggestions of the study, assumptions and conclusions.

Chapter 2: Literature review

2.1. Introduction

A good research cannot be accomplished without the support of rigorous literature review of previous scholarly research studies, literature and other related material. The review of literature of different published or unpublished work is an effective way to draw conclusion and decides a pathway for all the research study. The thorough review of literature is a significant precondition for development and actual carrying out of a research project. The review of literature helps to identify the research gaps, provide exploration of exiting studies on similar topics to avoid duplication of work, helps to formulate hypothesis. This chapter delivers the brief explanation of the concept of sustainability followed by environmental sustainability and then the current environmental conservation actions of hotel industry. The review of literature has been mainly grouped into following sections:

- Hotel industry and the environment.
- Conceptual framework.
- Relationship of managerial environmental attitude & actual implementation of ESPs.
- The concept of environmental sustainability in hotel industry.
- Current ESPs in hotel industry (Worldwide/India).
- Main determinants (motivational factors & barriers) of going green.
- Green certification hotel programs.

The reason of going through the previous literature was to present the summary of existing studies on the topics that are serving as a base to this study.

2.2 Hotel Industry and Environment

Initially hotel organizations were thought to be not harmful to the environment because of their unique characteristics of intangibility, inseparability and heterogeneity (Hays & Ozretic-Došen, 2014). During 1960s with the emergence of mass tourism, its negative impact on environment had become the issue of concern like; increased human activities were linked to hike in prices of daily need items;

scarcity of water and electricity; traffic jams; waste generation and environmental degradation at the destination. The tourism industry is generally resource based and depends upon environment, resulting in disturbing eco system and leaving significant carbon footprints on host destination. The hotel business works 365 days per year and it is an unambiguous part of our society and it contributes approximately 75% of environmental pollution by over consumption of water, energy and other resources in daily operational activities (Foster, et al., 2000; Bohdanowicz & Martinac, 2007; Chen & Chen, 2012).

Hotels have two-fold relation with the environment; first, many of them are based on natural resources that help to attracts tourists and secondly, all of them affects its surrounding environment by the way of different tourism activities like construction of basic infrastructure for rail, road and air connectivity, construction of hotels, resorts, shops and other recreational activities without taking into consideration the degradation part of environment. Some other negative impacts are land deprivation, noise and air pollution, solid left-over and littering, sewage toxic waste etc. In a research study (Chong, et al., 2009) has associated air pollution, energy encouraged emission and waste generation with human activities and the growth of the tourism industry would subsequently increases human activities at the destination and the carbon footprints also.

Bohdanowicz (2005) & (Kasim, 2009) in their studies have written about hotel organizations and their activities that negatively affect the environment in many means. Kirk (1998) & Bohdanowicz (2006) observed in their studies that hotels are one of the main segments of hospitality sector and leave considerably more negative impact on destination as supposed to be. Hotels are large consumer of water, natural assets, goods and energy and release a vast amount of carbon dioxide and other harmful residue at the destination. Hotels' huge consumption of local resources and its negative impacts on destination are discussed as below:

Energy

Hotels are great user of energy. Hotel businesses are huge consumer of energy resources in comparison to other tourism sectors. The high consumption of energy

resources in hotels is linked to 24 hours working, need of electricity for lighting, heating and air conditioning (Kasim, 2007). The luxury 4 & 5 star hotels with 19136 meter square floor area consume electricity up to 279 kwh/meter square and subsequently produce large amount of CO2 in the atmosphere (Kumar, 2011). The book 'Sustainability in the Hospitality Industry' by (Legrand, et al., 2013) mentioned that the hotels release 160 to 200 kg of CO2 per meter square depending upon the type of fuel used for energy in hotels. Some researcher found difference in the amount of energy consumption depending upon the geographical area of hotels. Deng (2007) found 73% cost of energy consumption in overall operating expenses in Hong Kong hotels while in New Zealand hotels, energy cost was 75% of total operating expenses (Becken, et al., 2001).

Water

Sunlu (2003) associated huge water consumption of hotels with hot weather conditions and the habit of tourists to consume more water during holidays. A luxury hotel in tropical environment consume 1000-1400 cubic meter of water everyday while a typical household consumption is only 1.2 cubic meter of water every. The huge water consumption of hotels depends upon the hotel activities like, number of rooms, golf, swimming pool, spa etc. (Kasim, 2007). A report by (Times of Malta, 2012) revealed that the consumption of water varies according to different categories of hotels, in three star hotels it is 199 liters each guest each night, while 4 star hotels consume 292 liters of water each guest each night and this consumption goes up to 462 liters of water each guest each night in five star hotels. In consistent (Bohdanowicz, 2005) added that water intake in hotels varies depending upon the category of hotel, size of hotel and standard of hotel and services offered. This research further reveals the consumption of service water (water used in toilets, showers and hand wash units) between 38 to 86 percent of total water consumption in hotels.

Waste

Hotels being the large consumer of resources produce huge amount of waste every day. Hotel industry produces both dry & wet waste. In a study (Bohdanowicz, 2006)

observed that waste is immediate noticeable negative effect of hotels on the destination environment. The quantity of waste produced by hotels varies depending upon the size of the hotel and the events that take place in the organization (Kasim, 2007). According to (Kumar, 2005) hotels generate waste through restaurants, banquets, kitchens, guestrooms, offices, laundry and gardens. Alexander & Kennedy, (2002) as cited by (Saenyanupap, 2011) reported that the waste generated from hotels include majorly food waste (46%), followed by paper waste (25.3%),cardboard (11.7 %), plastics (6.7%) ,glass (5.6%) and at last metal waste (4.5%). Thus, dealing with waste is an important issue of environmental initiatives while implementing ESPs in a hotel.

Table 4: Type of Waste Produced by Different Departments of Hotel

Non-Toxic Waste Type	Composition of Waste	Producing Source
Domestic wastes	Waste generated from kitchen, used/dirty/composed paper and packaging, plastic bags or packaging	Produced by different departments
Cardboards	Used in Packing	Mainly produced by Purchasing and some other departments
Paper Waste	Printed papers, leaflets, menu cards, maps, magazines, tent cards, newspaper	Admin offices, reception area, guests' room and restaurants
Plastic Waste	Bags, water bottles, guestroom amenities' bottles, separate portion packages for numerous products, plastic tube packaging used for tomato puree, mustard sauces and mayonnaise	Kitchen areas, restaurants, bars, guests' room and admin offices
Metal Waste	Aluminum cans of juices/sodas, lids of jars, containers of food and other aluminum packing material	Produced from restaurants, kitchens bars, guests' room
Glass Waste	Bottles, glasses, crockery and jars	Produced by bars, kitchen, restaurants, room service and guests' rooms
Discarded Cloth Waste	Table-covers, discarded bath/bed/table-linen, wiping sheets, polishing rags, heads of mops	Produced by bars, kitchen, restaurants, room service and guests' rooms
Wood Waste	Wooden packing boxes	Mainly produced by Purchasing department
Biological waste	Peeling and waste of fruits and vegetables, dry and dead flowers, grass, plants, branches and leaves.	Produced by bars, kitchen, restaurants, room service , guests' rooms and gardens

Based on the work of (Zein, 2008) as cited by (Omidiani & HashemiHezaveh, 2016)

Different scholars have suggested different techniques to deal with the hotel waste. The most accepted techniques are reduce, reuse and recycle (3 R).In consistent (Bohdanowicz, 2005) supported these techniques and stated that the implementation of 3 R can reduce guest room waste up to 50 grams per night. Bohdanowicz (2006) suggested to reduce waste by means of using dispensers for soap/moisturizers/shampoos and repairing of damaged furniture instead of buying new one.

Hotel industry leaves many negative impacts on the environment, so it has become foremost important that industry should act upon the concept of environmental sustainability instantly. Some of famous tourist destinations have faced decreased tourist advent just because of environmental degradation. Even the localities, who are not involved in tourism business, does not like the government's initiative to develop the area in a manner to attract the tourist to the place as this leads to insufficiency of basic amenities of local people. The quality of environment is important for tourist destinations to attract tourism. According to (Blake, 2007) hotels and resorts should return back to their environment that has been taken away. Adding to this (Zaiton Samdin, 2012) stated that execution of ESPs has become inevitability for the hotel businesses. Hotel industry globally is getting extra concerned about environmental problems so that environment could be protected for upcoming generations.

Initially researchers were more focused on studying the impact of commercial business houses on environment. While evaluating the impact of tourism (Lundberg, 2011) stated that the negative impact of tourism has become more visible with the growth of tourism and now researchers are stressing to examine the whole impact rather than studying economic impact of hotel industry.

2.3 Conceptual Framework

This study is aimed to explore the relationship of managerial environmental attitude and ESPs in the hotel businesses of Punjab. The growth of hotel businesses and shortcoming of natural resources in the state has raised the concern to sustain the environment of the area. The conceptual definitions related to topic are as follows:

2.3.1 Hotels

Wikipedia has defined hotel as an organization, which provide lodging and food to customers for short duration on payment basis. Services provided may differ based on type of hotel and the charges paid by customer. Star classification system of hotels is used to classify the hotels, based on the infrastructure available, services provided to customers, quality of services etc. The terms 'rating' 'grading' and 'classification' are used interchangeably referring to the same concept that is category of hotel.

Table 5: Classification of Hotels and Other Types of Lodging Based on Different Components

Classification by Star (Given by Government Committee HRACC)	Size	Location	Clientele	Duration of Guest Stay	Level of Service	Ownership	Alternative Accommodation
One Star Two Star Three Star Four Star Five Star Five Star Deluxe Heritage Heritage Classic Heritage Gold	Small Medium Large Very-large	Downtown Resort Suburban Motel Resort Flotel	Business Transient Residence B&B Hotel Time Share Convention Conference Casino Condominium	Residential Semi-residential Resort Commercial	Upmarket Midmarket Budget	Franchise Management-Contract Propriety Ownership Time share Condominium	Dharamshala Circuit House Dak-Bungalow Sarai Youth Hostel Lodge Yatri Niwas Forest Lodge Tents

Source: hmtutor.com (Hotel Classification, n.d.)

In this study, I have taken the census of classified hotels that includes one star to five star deluxe hotels of Punjab. The star ratings to hotels is provided based on many factors e.g. area of hotel, number of rooms, sizes of rooms, bathroom facilities, number of eating outlets, public area facilities, entertainment facilities, location, fitness center, and other luxury services offered.

Some hoteliers consider this classification disadvantageous to their establishment as smaller hotels providing quality service and accommodation to customers that is at

par to one-star category may not be considered fit to get the one-star classification just because of the lack of elevator facility in the hotel.

Hotel projects are approved at implementation stage and classified after being operational. The hotels that have approval at the implementation stage must apply for classification within three month of start of actual operation (HRACC, 2017).However; hotels that seek reclassification should apply for the same six month before the expiry of current classification. If a hotel does not apply for reclassification, six month before the expiry of current classification than its request would be treated as a case of fresh classification (HRACC, 2017).In India, classification for hotels is provided for five years.

According to sample frame, the facilities of one star to luxury hotels providing five star deluxe facilities are defined as follows:

One Star Hotels-Minimum size of the bedroom should be 120sq.feet with air conditioning facility in 25 percent rooms. The minimum size for the guestroom-attached bathroom should be 30 sq. feet. 25 percent bathrooms should have western style WC. There is no minimum bed width specified for this category of hotels. All the rooms should have attached bathroom facility. The facility of 24-hour running cold and hot water and shower area in all the guest bathrooms is mandatory. Water saving taps and energy efficient lighting is the basic requirement for all categories of hotels. The hotels having two floors in addition to ground floor should have 24-hour facility for elevation irrespective to category (one star to five stars deluxe) of hotel.

Two Star Hotels-In addition to the requirement as mentioned above for one-star category of hotels, these hotels required to have the beds with minimum width of 90 cm and 180 cm for single and double category respectively.

Three Star Hotels –These hotels should have rooms of 130sq.feet with air-conditioning facility in at least 50 percent rooms. The minimum area for guestroom-attached bathroom should be 36 sq. feet. In three star hotels at least 30 percent staff should be skilled. Staff rest room, washrooms, locker room and dining area is an integral part to get the classification. Other facilities include minibars, laundry

facility, tea and coffee making facilities in the room, travel desk and left luggage facility, doctor on call, health club, beauty and barbershop, valet parking, CCTV at strategic locations etc.

Four Star Hotels-The minimum room size should be 140sq.feet with air conditioning facility in all rooms (100%). The minimum area for guestroom-attached bathroom should be 36 sq. feet along with bathtub. According to amended rules from 01.04.2017, all new four-star hotels should have bathtub in 10% of bathrooms. These hotels also require 30 percent skilled staff. Staff rest room, washrooms, locker room and dining area is an integral part to get the classification. Other facilities include suite rooms, minibars, safe in the guest rooms, laundry facility, tea & coffee making facilities in the room, travel desk and left luggage facility, doctor on call, health club, beauty & barbershop, CCTV at strategic locations, Wi-Fi, business center, valet parking and heating and cooling facility in the public areas are mandatory.

Luxury hotels providing five star and five star deluxe facilities --the minimum size for rooms should be 200 sq. feet with air conditioning facility in all rooms (100%). The recommended area for guestroom-attached bathroom is at least 45 sq. feet along with bathtub. According to new amendments of HRACC from 01.04.2017 onwards, all new projects of five star hotels and five star deluxe hotels should comprise of bathtub in 25 percent and 50 percent of bathrooms respectively. In this category, at least 60 percent staff should be skilled. Staff rest room, washrooms, locker room and dining area is an integral part to get the classification. Other facilities include suite rooms, minibar, laundry facility, tea & coffee making facilities in the room, safe in guest rooms, travel desk and left luggage facility, doctor on call, health club, beauty & barber shop, CCTV at strategic locations etc. Wi-Fi, business center, swimming pool, valet parking, heating and cooling facility in the public areas and conference facilities are also mandatory.

All the above-mentioned category of hotels should provide the facilities to attend the differently abled guests, like guest room, bathrooms, public rest rooms should be disabled friendly with the provision to carry the wheel chair inside and entrances should have anti- slip ramps.

Following eco-friendly practices are necessary for all the above-mentioned categories that include:

Sewerage Treatment Plant (not necessary for the hotels that have completed construction before 1.4.2012).

a) Rainwater harvesting.
b) Waste management Techniques.
c) Pollution control methods for water, air and noise.
d) Non CFC equipment of refrigeration and cooling plants.
e) Energy and water conservation equipment.

Source: (HRACC, 2017).

2.3.2 Sustainability

Sustainability has been discussed in urban planning, ecology, economics, civil engineering and philosophy (Brown, et al., 1987; Dyllick & Hockerts, 2002).According to (Brown, et al., 1987) sustainability is an association among humans and universal environment. Sustainability has been found much more than minimizing the negative impact on environment as it also tries to sustain the culture, heritage and local ecosystem of the destination and sharing the benefits with local community (Costanza & Patteb, 1995). In consistent (Bartlett, 1994) reported that the rate of growth of population is infinite while resources, ecosystem, environment and the earth are finite. Further (Bartlett, 1994) added that the concept of sustainability came into existence, when mass media alerted the people about the rising global problem of overpopulation, environmental degradation and water drought. Daly (1996) mentioned that effective sustainable growth can be achieved by means of maximum recycling of material things and by not growing the annual manufacturing of materials.

Bartlett (1994) recommended sustainability keeping in view the following facts:

- Human population and resource consumption cannot be sustained.

- Larger population and larger consumption of resources turns sustainability into a difficult task.
- Sustainability demands the size of population in relation to the rechargeable capacity of ecosystem.
- Growths in the consumption of nonrenewable resources lead to deceasing rate of resources.
- Humans will always remain in need of agriculture, so it is essential to sustain the land and other natural assets for future benefits.

Weaver (2006) as cited by (Kapiki, 2012) reported sustainable tourism as a tourism which consume and conserves resources wisely to preserve their long term feasibility. Sustainable tourism minimizes the adverse impact and maximizes the constructive impact on the surroundings.

According to (UNWTO, 2005) as cited by (Kapiki, 2012) hotel sector of tourism implement the concept of sustainability in two ways:

1. by selecting the location and design of the establishment;

2. Implementing ESPs in daily operational services e.g. water and energy conservation, recycling etc.

Here the question arise what is the most accepted explanation of sustainability for the hotel industry? According to (Telfer, 2012) sustainability is to meet the need of today without compromising the need of future directions. Sustainability is defined as society advancement for more fair & wealthy world in which culture and environment are preserved for future generations (Dyllick & Hockerts, 2002). Many definitions of sustainability have described the term in different ways on same foundation. The most accepted definition of sustainability for hotel industry is of World Commission on Environment and Development (WCED) and many hotels are following it like Fairmount Hotels & Resorts, Inter-continental Group of Hotels, Marriot, Hilton and Kempton (Houdré, 2008).

The hotel industry encompasses sustainability in three dimensions ;(a) economic (b) social and (c) environmental (Stipanuk & Roffmann, 2015). They further added that

cost saving, and financial benefits are main factors of economic sustainability. Social sustainability develops social responsibility in the organization and improves the loyalty of business and employees (Graci & Dodds, 2008).Social responsibility helps to build the good reputation of firm and subsequently helps in marketing of business. Environmental sustainability is larger concept linked to global life support system involving maintenance of air, food, water, waste, energy at destination (Goodland, 1995). Similarly, (Houdré, 2008) defined sustainability strategy on 'triple bottom lines'; economic profitability, social responsibility (towards employees and society) and environmental protection.

In consistent (Kasim, 2007) supported the three-dimension concept of sustainability by adding that incorporation of these three principals in business can achieve profitability by being leader in the market, in addition to be proactive in environmental initiatives.

2.3.3 Environmental Sustainability

According to (BusinessDictionary, n.d.) the environmental sustainability is, "The maintenance of factors and practices that contribute to the quality of environment on a long term basis." Goodland (1995) related sustainability of environmental to energy, water, food, air and waste and stressed to apply sustainability to these factors. Further, (Goodland, 1995) added that environmental sustainability is a set of four main actions (1) consumption of renewal and (2) nonrenewal on manufacturing site and (3) pollution and (4) waste control on the consumptions site. He further discriminated application of environmental sustainability based on country, as each country must maintain different balance.

Goodland (1995) gave following general definition of environmental sustainability which could be applicable to all irrespective of country and sector.

1. Output rule: waste release of a unit should be kept minimum and according to the absorptive capacity of area.
2. Input rule: Renewables -consumption should be in accordance to regenerate capacity of natural system.

Non-renewables-the rate of consumption should be below the renewable sources.

3. Operational principles: (a) the rule (population x per capita consumption x technology) should be in accordance of carrying capacity.
   (b) Sustainable expansion must be related to efficiency increasing instead of all over increasing.
   (c) Renewable resources must be consumed on fully sustainable basis.

Hotel sector can significantly contribute towards environmental sustainability by reducing the consumption of energy and water and adopting waste management techniques of 3R (reduce/recycle/reuse). Hotel industry is adopting and implementing the green practices since 1990 due to customer demand and financial gains. According to (Post & Altmanm, 1994) there are three main domain of voluntary ESP in hotels e.g. energy management, water management and waste management. The sustainable practices differ according to the need of country (Goodland, 1995). Each country requires different input and output to meet the environmental sustainability of the concerned location for example some countries may want to sustain the energy and water resources while others may want to control the pollution and some countries may initiate the efforts to control the mass tourism to a particular destination (Goodland, 1995).

Green and eco-friendly hotels follow strict rule and regulations, policies and procedures of certifiers. An awareness of the adverse environmental effect of hotel industry and issues of environment due to expansion of hotel business is essential for the destination and tourism development in the region. Further (Goodall, 1997) reported that even if best ESPs are implemented in tourism industry, the further new development in tourism will attract more impact on natural resources.

The acceptance and execution of ESPs in the hotel businesses are associated with many benefits that are described as follows:
Scanlon (2007) in his study reported three main benefits associated with environmental actions: operational cost saving, improved returns and productivity. The results of (Scanlon, 2007) study are derived from the study of Fairmont Hotel

and Resorts and InterContinental Hotels that are enjoying above-mentioned financial benefits after the implementation of ESPs in their organizations.

The green hotels pose a brand image and provide an edge over the competitors in the market (Graci & Dodds, 2008) . They further added that green hotels attract special category of customer who are nature lovers, improve market share and employees' commitment to organization. In consistent to these findings (Kasim, 2007) also stated that green hotels attract additional customers who are concerned towards the environmental problems and prefer to stay in hotels that initiate to sustain the environment. In support (Claver-Cortés, et al., 2007) stated that implementation of ESPs deliver both direct and indirect returns to the organizations. Direct returns are related to inflow of tangible and intangible of paybacks to companies while indirect benefit includes the sustainability of destination.

2.3.4 Environmental Attitude

Environmental matters have gained significant attention in last decades and remained in focus in academic journals, magazines, trade journals and newspapers. Different scholars have defined attitude in many ways. The following definitions adopted by many researchers may help to explain the attitude and so on environmental attitude:

Table 6: Definition of Attitude

S.No.	Author	Findings
1	(Carter & Schooler, 1949)	Attitude is combination of motivational, perceptual, emotional and cognitive process with respect to our environment.
2	(Petty & Wegener, 1998)	Attitude is an individual's overall viewpoint about some matters, objects and persons.
3	(Ajzen & Fishbein, 2000)	Environmental attitude is a favorable or unfavorable feeling towards a physical environment or related problem.
4	(Kollmuss & Agyeman, 2002)	Attitude is a negative or positive feeling towards a person, issue or objective.
5	(Khanzian, 2004)	Attitude is a belief or a behavior attention a person has for environmental related issues.
6	(Clayton, 2012)	"Environmental attitudes are important because they often, but not always, determine behavior that either increases or decreases environmental quality".

New Environmental Paradigm (NEP) were discovered by (Dunlap, 2008) to measure the people belief system towards environmental issues. Although some researcher found this paradigm weak to measure the all belief of people related to environmental issue, still NEP is most commonly accepted instrument in academic research, to find out the environmental attitude of people. This is because of the measurement items that NEP uses (limit of human growth over nature and balance of nature etc.), are found to be main component of environmental attitudes.

The result of previous studies reported that effective implementation of ESP in an organization depends upon the involvement and teamwork of all the staff associated in actual implementation. The willingness of staff depends upon their attitude towards the concept. In a study of managerial environmental attitude (Park, et al., 2014) found that managerial attitude about supposed benefits of environmental management program affects hotels' environmental management program. In consistent (Kollmuss & Agyeman, 2002) reported in their study, the influence of environmental attitude on pro- environmental actions as varying and small. Many earlier research studies have explored the association among environmental attitude held by hoteliers and actual environmental behaviour (Kaiser, et al., 1999; Best & Thapa, 2013; Hall, et al., 2016) and found significant relationship between the two constructs.

2.4 Relationship of Managerial Environmental Attitude and Actual Implementation of Environmental Sustainable Practices

An important question arises here that what drives hotels to go green or adopting ESPs? Researchers have identified many internal and external motivational factors behind environmental sustainable initiatives of hoteliers e.g. customer demand, improved image, financial gains, resource availability etc. (Massoud, et al., 2009; Chen & Chen, 2012). These motivational factors can play an important role if the attitude of managers is positive towards environmental issues (Bohdanowicz, 2005; Park, 2009).The top down process started by top managers or owners plays a significant role in implementing effective green concept in an organization.

Gore (1993) stated in his book that decision making in small firms depend upon the owners/managers and so the collection of information regarding environmental

policies and strategies is minimum. According to (Brown, 1996) some managers still working in traditional ways and do not understand the worth of environment in relation to their business. These managers believe that environmental policies are part of corporate strategies while in fact it should be considered in organizational strategic policy in relation to growth and financial gains. The study of Kirk (1995) observed that successful implementation of environmental strategy requires its adoption from the top management; otherwise it cannot be implemented successfully. McDonough (2008) as cited by (Doody, 2010) reported in his study that many hospitality proprietors, developers and managers are not having enough awareness about the worth of going green and as a result having a unworried attitude towards environmental sustainable actions. In consistent (Knowles et Al and Monovan & McElligott,2000) as cited by (Doody, 2010) in their study of Irish and UK hotels found that some managers are not willing to include their proprietors in innovative and active work and contended to work in low cost actions leaving aside the complicated approval works.

Brown (1996) believes that many hospitality managers are conscious about the adverse influence of their concerned hotels on the destination but restricted in implementing ESPs unless some definite financial benefits are attached to them. Further (Brown, 2006) also added that hospitality managers are pressurized to restrict to the budgets and achieve maximum profitability that restrict the acceptance and execution of environmental actions by the managers.

Many researchers (Anderson & Bateman, 2000; Bansal & Roth, 2000; Banerjee, 2001) have reported the role of top management as base of successful implementation of sustainable practices in an organization. In a study (Banerjee, 2002) found top management more environmentally concerned by means of threat of regulatory forces, customer demand and cost saving opportunities. According to (Tzschentke, et al., 2004) personal ethics and beliefs of managers play a vital part in adopting green practices among small independent organizations. The top managers' attitude regarding perceived benefits of ESPs positively affects the decision of adopting green concept in the business (Park, 2009). Thus, managerial environmental attitudes are found to serve as the basis for pro-environmental behavior of businesses. Dief (2012)

stated in his research study that personal and organizational values have direct impact on the implementation of ESPs in developing countries.

Kim, et al. (2015) explored a strong relationship between the general managers' commitment towards environmental sustainability and actual environmental performance of hotel. It is important to examine the environmental attitude of managers as it is directly linked with environmental sustainable actions of hotels (Pereira-Moliner, et al., 2015). There are abundant research studies that support the significant relationship between managerial environmental attitudes and actual execution of environmental sustainable actions of businesses. Some contradict studies are also there, as (Claver-Cortés, et al., 2007) have reported no relationship between attitude and actual behavior.

Table 7: Research Literature on Relationship of Environmental Attitude and Actual Environmental Behavior

S.No.	Country	Author	Findings
1	Spain	(Céspedes-Lorente, et al., 2003)	Environmental concern is the reason for corporate environmental management practices.
2	Europe	(Bohdanowicz, 2005)	Attitudes are affected by geographical location of country and the business policy. Attitudes play significant role in actual implementation of green concept.
3	Spain	(Ayuso, 2006)	Top management have little knowledge of organizational involvement in environmental sustainability. Hotels are Appling voluntary environmental practices because of managerial attitude and customer.
4	Macau, China	(Penny, 2007)	In addition to environmental attitude of managers there are other barriers also such as low customer demand, poor knowledge about the environmental issues and the deficiency of strict governmental legislation effecting the adoption rate of ESPs in hotels in Macao.
5	Greek	(Maleviti, et al., 2012)	The hoteliers' opinions and beliefs control the implementation of new practices.
6	Caribbean	(Best & Thapa, 2013)	This study found positive environmental attitude significantly related with the effective implementation of environmental sustainable programs.
7	Taiwan	(Teng, et al., 2014)	Attitude significantly mediates the relationship between Energy Conservation and Carbon Reduction (ECCR) information and behaviour.
8	West Africa	(Mensah & Blankson, 2014)	Hotel managers reported a positive environmental attitude, expensive and larger hotels were more dedicated for formal environmental management system and Eco certification.
9	General	(Hall, et al., 2016)	Attitudes are positively associated with sustainable practices.

10	Romania	(Mester, et al., 2016)	Respondents were having positive attitudes towards sustainable tourism, but actual implementation was not there due to some other barriers. One barrier that affects the interest was, certificates do not say too much on promotion of sustainable tourism. As a result, organizations are unwilling to hold certifications
11	France	(Leroux & Pupion, 2018)	Environmental sustainability is described by attitude towards environmental threat, and skill to pass eco-certification. Positive environmental attitude and pressures of the stakeholders help to go green

Researchers have adopted various methods to measure the environmental attitude. Maximum of the earlier studies have reported significant connection between environmental attitude and actual environmental behavior. Managerial environmental attitudes are affected by many factors that are described as follows:

The managers of International chain hotels with well-defined environmental sustainable programs, exclusively dedicated staff, environmental training, and policy of rewards for environmental innovations have more positive behavior towards environmental sustainability. According to (Hemingway, 2005) absence of formal environmental policy and lack of decision making empowerment in local small hotels demoralize the environmental positive managers, who may otherwise want to do something for surrounding environment.

Many previous studies reported the more pro-environmental actions of the larger hotels in comparison to smaller hotels (Bohdanowicz, 2005; Gil, et al., 2001). In addition (Bohdanowicz, 2005) also found more positive environmental attitudes among the managers of chain hotels in comparison to independent hotels. According to previous studies managerial attitude may depend upon the geographical location of organization, financial resources of the hotel, size of the hotel and some other variables.

Chan (2014) recommended to integrate some ecological mechanism in management to develop employees concern, knowledge and awareness towards environment.

Brown (2007) said in his findings that environmental reporting should be made an essential part of performance appraisal system of general managers to achieve the maximum motivation for effective implementation of ESPs.

2.5 The Concept of Environmental Sustainability in Hotel Industry

The sustainability idea was originated in 1970.The first international meeting that made an effort to calculate the effect of human actions on environment was the Stockholm Conference on the Human Environment held in Sweden during 5-16 June in 1972 (also known as The United Nations Conference on Human Environment (UNCED)) (Houdré, 2008) . This conference came up with environmental manifesto to safeguard the finite environment and natural resources. This conference led the constitution of UNEP in December 1972 for the coordination of sustainability globally and safeguards the environment.

Environment sustainability concept came into existence in 1970 but it gets formalized in 1992 during UNCED (also known as Rio De Janeiro Earth Summit) held in Brazil. During this conference 172 nations agreed on economic development in accordance with environmental sustainable framework to reduce the negative impact of different industries (Rahman, et al., 2012) as cited by (Yusof, 2013). Hotel industry took time for adopting the sustainability concept, as initially this sector was considered smokeless to the environment. The advent of bulk tourism carried along many negative impacts on the destinations and subsequently the concern to safeguard the environment was evolved.

As the tourism industry is performing a significant part in the financial development of countries, its expansion cannot be suggested to be hold. At worldwide level this industry is expanding at boundless speed, but now it is time for tourism industry and its major sector that is hotels to fulfill certain standards for environmental protection either volunteering or under the pressure of legislation. According to (Bohdanowicz, 2005) hotels being resource intensive and with frequent inefficient systems of sustainability and operational routine work, produce large negative environmental influence and show an vital requirement for environmental friendly initiatives in the business. Brown (1996) reported in her study that the hospitality industry would not be able to overlook the implementation of ESPs due to many pressures e.g. climate change, legislation, increasing energy costs, decreasing water resources, customer demand, financial gains, local accountabilities and ultimately for the conservation of the hotel industry itself.

Implementing ESPs by the hotels business is the key to minimize the harmful impacts on surroundings environment. The effective implementation of ESPs can be considered under two categories; organization or software and operation or hardware (Gil, et al., 2001; Carmona-Moreno, et al., 2004). In addition (Kapiki, 2012) recommended the following sustainable practices for hotels; green accreditation and constitution of green team, motivation and training of the employees, promoting eco initiatives through marketing, reducing energy & water consumption and waste production, use of renewal energy, offering local fresh and healthy food to customers. According to (Bhatt & Kaur, 2015) green practices refer to make business green by adopting environmental friendly practices. Such businesses have fewer or no adverse impacts on surrounding environment. Thus, literature supported that effectively implemented ESPs are associated with financial gains and reduced negative impact on the destination.

Table 8: Research Literature on Environmental Sustainability in Hotels

S.No.	Author	Findings
1	(Mensah, 2006)	Green practices are associated with healthy, safe and clean environment.
2	(Graci & Dodds, 2008)	The benefits of going green are an edge over competitors, cost savings, employee faithfulness to organization, regulatory obedience, creating a niche in the industry, managing risk and social concern.
3	(Verma, 2012)	Customer demand and economic benefits are most influential factors behind going green in hotels.
4	(Losanwe , 2013)	Small environmental sustainable initiatives, which require little investment, can bring economic benefit to hotel. Environment and hotels both are benefitted by going green.
5	(Yusof, 2013)	Study revealed that organizations generally focus on energy, waste and water. Less focus is found towards rainwater harvesting, indoor air quality, renewable energy

According to Brown 2006 as cited by (Doody, 2010), “the hospitality industry will no longer be able to ignore its environmental responsibility as it will have to response number of pressures. For example, green tourist will demand green accommodation; legislation regarding disposal of waste has implication for the hospitality industry; and the continued increase in energy cost will necessitate reduction in use”.

2.6 Green/Environmental-Friendly Hotels

The terms green and environmental friendly hotels is used interchangeably. The concept of green hotels came into existence in 1980 and has gained immense popularity worldwide in recent years. Various nations are adopting creative strategies for the promotion of this concept. Research scholars have been pressing on the importance of going green.

Green/Environmental-friendly hotels have minimum negative impact on environment with no compromise on quality of product and services related to guest satisfaction.

According to (Blake, 2007) the concept of sustainable tourism, responsible travel, eco-friendly and eco-tourism is based on the same principles. The research study of (Clem, 2009) added and reported that going green shows a social awareness regarding conserving and developing the natural resources of the earth and protecting them for the requirement of society. In addition (Lee, et al., 2010) explored in their study that the image of green hotel helps in getting and retaining the customers. Incorporation of green practices in hotel operations are prerequisite in building the green hotel image.

According to (Yusof, 2013) hotels usually adopt ESP in three domains; water management, energy conservation and waste management and less attention is paid towards maintaining indoor air quality, renewable energy, rain water harvesting and sustainability of destination. According to (BusinessDictionary, 2018) green hotels ensures to provide organic and non-smoking environment in hotel organization. In consistent (Green Hotels Association, n.d.) defines green hotels as environmentally sustainable organizations in which managers are determined to conserve water, conserve energy and minimize the solid waste production for the sake to protect our earth.

Initially hotels adopted green practices in the domain of energy, water and waste management. Later due to different green certification system, the green initiatives were expanded to other areas also like sustainable site selection and planning, local employment, green transportation, indoor air quality, green chemicals, noise control, wind energy, rainwater harvesting, wastewater treatment and reuse etc.

2.7 Current Environmental Sustainable Practices in Hotel industry (Worldwide)

Currently, some hotels are having pro-environmental behavior and implementing ESPs in different area like, housekeeping, laundry, guest rooms, food and beverage, meetings and conferences.Many researchers have studied these ESPs and classified them into mainly three domains: energy conservation, water and waste management (Kwong; Environmental, 2005; Chong, et al., 2009; Ustad, 2010). The above-mentioned areas of sustainability reported the following ESPs in common from different green hotels;

Energy

Energy efficiency has been the most implemented environment initiatives in hotel organizations as hotels are huge consumer of energy, gas and diesel. In order to manage both operational cost and environment sustainability the implementation of energy management is essential. The managerial attitude and employees perform a vital part in the effective implementation of energy conservation campaign (Min, 2011). Solar/wind energy is the best substitute for conventional energy, (Bader, 2005) mentioned in his study that solar systems can provide up to 25 percent of the entire energy requirement of a hotel. Double gazed vacuum-sealed windows conserve energy and reduce noise. In existing hotels, the coating of polyester layer on windows has reported to cut hotels' 155kWh of electricity per year (Chan, et al., 2008). In a study conducted on Hyatt Regency International & Sheraton Auckland Hotels & Towers New Zealand it was found that small changes of linking energy uses with occupancy sensor and key card technique and lowering the laundry temperature to 65 degree Celsius from 85 degree Celsius, the savings were $14000 annually and $2000 quarterly respectively (Alexander & Kennedy, 2002). Marriot International in USA applied smoke free policy and subsequently reduced 30 percent energy consumption in air circulating equipment.

Based on the literature review of different researcher (Enz & Siguaw, 1999; Bader, 2005; Houdré, 2008; Ustad, 2010; Aggarwal, 2015; Bhatt & Kaur, 2015) the following energy saving practices were found common in all hotels of different regions:

- Implementing energy renewal system like wind power, solar system.
- Key/card/occupancy sensors are used for controlling energy consumption in guest rooms.
- Replacing conventional lighting equipment with Light Emitting Diode (LED)/florescent lights.
- Thermostats are being used to control the energy consumption of air conditioners.
- Energy efficient equipment in business centers.
- Heat resistant triple glazed window are being used to control heat and subsequently the energy consumption of air-conditioning system.
- LED exit signs.
- Roof top swimming pools or gardens to sensor heat absorption.
- Waste heats from generators are being used for heating the water.
- Energy efficient laundry equipment.
- Most hotels adopt smoke free policy to reduce the energy consumption of air circulating equipment.

Water

Throughout the world, water level is falling drastically. In dry and hot weather of summer, the issue of water shortage is of more concern. Water conservation is necessary to save water for future generations. Hotels are large consumer of water and energy. Water is found as the integral part of hotel amenities provided to guest directly or indirectly to enjoy luxury services like swimming pool, spas, golf grounds, landscaped gardens etc. (Graci & Kuehnel, 2011). The maximum of the water intake in hotels occurs in guest rooms so it is recommended to reduce water consumption among resident guests by means of water conserving fixtures (Min, 2011). According (Graci & Kuehnel, 2011) 50 percent of water could be saved by applying simple

saving methods and just greywater recycling reported to save nearly 23 percent of total water consumption. In addition (González, 2001) stated in his study of hotels in Gran Canarias that in the laundry, run time of washing machines and use of water can be reduced simply by using the low alkaline environmental friendly washing liquids. The study of water conservation by (Brodsky, 2005) found that linen and towel reuse initiatives can reduce the water consumption by 81000 gallon and detergent use by 540-gallon annually. González (2001) added that reuse of linen is often seen as lack of quality service by customers and so hotels hesitate to incorporate these ESPs in their operation. Other applied procedures to reduce the water consumption include low pressure shower heads and taps, double flush system in toilets, aerated water flow in taps (Iwanowski & Rushmore, 1994; Bohdanowicz, 2006) .These procedures are easy to incorporate in existing buildings and budget friendly too. Thus, water conservation should be incorporated in sustainability program of hotels, so that wastage can be minimized.

Many researchers (Kirk, 1996; Chan & Ho, 2006; Scanlon, 2007) have found following practices of water conservation in common with most of the hotels:

- Linen reuse program.
- Low-pressure shower heads, faucets, dual flush WC tank, urinals.
- Regular check on water leakage.
- Water efficient or xeric gardening technique.
- Water efficient dishwasher and laundry.
- Using treated grey water for irrigation purposes.
- In laundry, the last water of rinsing is used for the pre-washing of linen, uniforms of the next cycle.
- Laundry machines and dishwashers are run on full load.

Waste Reduction

Waste management is a technique to minimize the volume and harmfulness of garbage (Iwanowski & Rushmore, 1994) . In consistent (Kirk, 1996) reported that it is important to manage waste at source because normally a hotel creates 1 kg of waste each guest each night. The formation of waste legislations, lessening landfill areas,

and high cost of waste disposal are motivational factors for adopting waste management practices. Unplanned dumping of waste leads to litter, dust, fouling smell, rats, flies, soil erosion etc. Hotels can decrease the quantity of waste produced by the concept of reduce, reuse and recycle. In a study of environmental attitudes in European hotels (Bohdanowicz, 2005) found that a large amount of waste (50-60%) in a lodging facility can be reused or recycled. It was proposed to hotel managers to install recycling plant at organization to adopt reduce, reuse and recycle approach. The process of recycling and reducing the waste can generate considerable profit for the organizations. In consistent (Alexander & Kennedy, 2002) food waste comprises of 46% of total solid waste produced by hotels, which can be composted to be used as organic fertilizer instead of dumping anywhere else.

Nath (2014) stated in his study that the major challenge is to deal with the waste produced by hotels due to non-sorting techniques of waste and outdated/negligible techniques of recycling. Improper management of waste results in ill health of employees and persons coming in contact.

Food service areas of hotel produce waste by means of cans, bottles, disposal crockery/cutlery, corks while housekeeping adds packaging of cleaning agents, plastics etc. The waste management techniques of organizations depends upon the legislation of the region for example United Kingdom is found more efficient in waste dealing in offices in comparison to guest rooms of hotels (Bohdanowicz, 2006; Erdogan, 2007) . Green hotels are dealing with waste production by the means of sewage treatment plants, vermin composting, recycling and reducing disposal of Furniture Fixture and Equipment (FF&E). The waste management can also help in achieving sustainability by means of employment generation, saving landfill areas and environmental degradation (Nath, 2014).

The following practices of waste reduction or recycle has been found common in most of the research studies (Kirk, 1996; Chan & Ho, 2006; Houdré, 2008; Chong, et al., 2009):

- Separate recycle bins in all areas of hotels.
- Purchasing recycled items.

- Use of pencils while refusing pens.
- Donation of furniture and left over food.
- Purchasing items in bulk quantities.
- Composting of kitchen waste
- Refillable containers for bathroom amenities.
- No use of non -biodegradable disposable items.
- Sewerage treatment plants.
- Used bath soap from guestrooms are used as detergent to wash the uniforms of staff.

2.8 Current Environmental Sustainable Practices in Hotel industry (India)

While the concept of going green is widely accepted in developed countries, it is still crawling in many developing Asian nations like India and China.

As per (Central Pollution Control Board, 2000) hotel rooms in India generate 1kg-6kg/day solid waste on an average. Hotels represent 23 percent of commercial sector and produce 45 percent of municipal solid waste, which releases harmful gases like Methane, Carbon Dioxide, and negatively affect the surrounding environment.

Indian government realized the need of law in the same direction after the Bhopal Gas Tragedy and passed the Environment Protection Act of 1986 under Article 253 of the Constitution. The main objective of this Act is to get implemented the resolutions of the UNCED for the safety and development of the human atmosphere and the controlling of threats to human lives, other living beings, property and plants (Chakraborty, 2018).

Ministry of Tourism, Government of India has revised the rules of HRACC in January 2018, keeping in consideration both the development of tourism and framework of environmental sustainability. These guidelines required to be fulfilled by the existing classified/new hotel projects/and those required permission and classification from Ministry of Tourism under the head of HRACC in future. According to these revised guidelines hotels that require approval at project stage, need to have incorporated eco-sustainable practices like sewerage management plant, pollution control methods for

air, water and noise, rainwater harvesting, waste control methods, introduction of non-Chlorofluorocarbon (CFC) air-conditioning and refrigeration equipment ,energy and water saving methods like use of Compact Fluorescent Lighting (CFL) equipment, solar energy system and water conservation devices in the premises (HRACC, 2017).

However, subsequently in view of the financial significance of tourism and to promote tourism in India, some relaxations in basic guidelines were offered to hotel businesses. According to (HRACC, 2017) in India it is voluntary for hotels to get approval or classification from HRACC and if a hotel (that has completed construction before 01.04.2012) need classification by HRACC, a sewage treatment plant is not mandatory condition for applying.

In consistent to the acceptance of green concept and ESPs on the worldwide level, many hotels in India are voluntary implementing ESPs in their daily operations. According to (Kannampilly, 2012) Park hotel Hyderabad was the first green hotel of India in 2009 that received LEED gold accreditation by USGBC. It has 280 rooms with 90-percent area marked as smoke free. ITC Gardenia, Bangalore was awarded Platinum green certificate by USGBC, LEED in the same year 2009, this was the first hotel in India with highest green accreditation. All upscale hotel of ITC India is platinum certified green hotels by LEED. These hotels in India have managed 100 percent of the flushing, irrigation, and cool tower needs through recycled discharge water. In laundry, the water from the last rinsing wash is used for the initial-wash of the next set. ITC Hotel Grand Chola Chennai (world's biggest LEED Platinum ranked hotel) installed its own wind energy plant of 12.6 MW capacities to meet the 100 percent electrical requirement of the hotel. Energy is conserved by means of LED lights, CFL lamps, auto time management and motion sensor techniques. The Raintree, Anna Sarai (Green Hotel), Chennai has reduced the water pressure of bathroom showerheads and washbasin faucets to 8-9 liter a minute from the standard 12-15 liter per minute and in this way reduced its water intake by half.

Keeping the pace with green initiatives of hospitality industry worldwide, Indian hotel industry is also recognizing and adopting the ESP in their daily operations. These green hotels are limited in number in India and located in big cities only. This concept

needs to be promoted in all category of hotel throughout India to save our environment for future generations. Cooperation among public and private sectors businesses is necessary for the growth of ESPs in hotels and other tourism sectors at large scale.Environmental conscious hoteliers will definitely go for sustainable practices in their everyday processes (Prayag , et al., 2010).

2.9 Main Drivers of Going Green

2.9.1 Motivational Factors

A through literature review has been done to explore the main motivational factors behind the pro-environmental actions of hotel industry. Many previous studies have identified some common main drivers of hoteliers' environmental initiatives. The level of significance of these drivers differs organization to organization as per the different operational situations like environmental issues, government regulations, types of customer and characteristics of concerned hotel property.

According to previous studies there are many benefits associated with implementation of ESPs in hospitality industry that are discussed as below:

Cost Saving

The benefits of going green can be summarised as reduced costs, increased revenue, low negative impact on environment, increased brand image, improved relationship with employees, society and customers etc. (Kirk, 1998)**.** Several hotels around the world have implemented ESPs in their organisations to minimize their adverse effect on surrounding environment and to attract other benefits discussed above. Many previous studies (Alexander & Kennedy, 2002; Sloan, et al., 2005) reported the cost reduction as most visible benefit by implementing the environmental sustainable actions. In consistent, (Bohdanowicz, 2005) in a study of environmental attitude of 600 European hoteliers reported that reducing operational cost was most influential factor behind ESPs of hotels. Scanlon (2007) supported and stated in his study that the cost saving factor is one of the most mentioned benefits of ESPs, this statement is based on the study of InterContinental & Fairmount hotels. These hotels are enjoying financial saving and increased profits by implementing ESPs. In consistent

(Tzschentke, et al., 2008) found ethical and economic benefits as main driver of ESPs. In most of the previous studies (Park, 2009; Verma, 2012; Losanwe , 2013) financial gains and reduced operational costs have been reported as main motivational factors behind the environmental sustainable actions of hotels. Many more research studies found improving resource efficiency a major significant factor in adopting the environmental sustainability concept (Iwanowski & Rushmore, 1994; Mensah, 2006).

In other studies also cost reduction remained as one of the most influential motivational factors even if not reported as number one influential factors like (Mensah, 2006) conducted his research in Ghana on hoteliers' perceived benefits of ESPs and observed that offering clean, safe and healthy environment along with excellence service, cost reduction and environmental sustainability were main objectives of environmental sustainable actions. According to (Shindle, 2013) initially many hotels hesitated to accept ESPs in daily operations due to increased initial capital cost and budget approval problem from top management but now many hotels have accepted sustainability keeping in view its short- and long-term benefits. In addition (Fukey & Issac, 2014) in their study, focused on other benefits like enhanced reputation, more loyal customers, employees' stability, word of mouth advertisement and financial gains etc. Hays & Ozretic-Došen (2014) stated that green/environmental friendly hotels enjoy many benefits like environmental sustainability, long term cost reduction and satisfaction to the customers who are seeking green services.

Lakshmi (2002) demonstrated the same finding in the context of Indian scenario by the study of Hyatt Regency Hotel, New Delhi. The findings of this research study are presented in table 9 below.

Table 9: Benefits of Implementation of Environmental Management System In Hotel Hyatt Regency New Delhi (Lakshmi, 2002)

Environmental Actions	Cost Saving
• Change of 3000 conventional bulbs of 25w of corridor area of guest floors, banquet halls, lobby entrance, with CFL of 5w.	Two lakh monthly.
• Hot water tanks were fixed with condensing coil in order to capture the heat arising primarily from Laundry and fixing of exchanger to extract extra temperature from the condensate.	Twenty thousand monthly.

• Decrease in contract requirement from 4118 KVA to 3000 KVA.	One lakh, sixty seven thousand monthly.
Installation of halide lamps made of metal in Tennis court. • Electrical load reduced from 32kWh to 8kWh. • Lamp replacement cost reduced. • Distribution of light improved. • Decrease in manpower expenses used to handle fused bulbs.	One hundred fifteen rupees hourly.
• Upgradation of capacitor panel to increase the power generation from 0.96 to 0.99.	Rs. One lakh, fifty thousand monthly.
• Procedure of using the recycled water for horticultural and water fountains	Seventeen thousand monthly.
• Elimination of gas-pilot-burners from kitchen areas.	Eight thousand, five hundred monthly.
• Replacement of chilled pool plant with heat exchanger having plates to use the chilling properties of central air conditioning plant to escape the running of compressor in summer months.	Thirteen thousand monthly.
• Fixing of temperature exchanger in steam boilers-exhaust for collection of heat.	Ninety thousand monthly.

Source (Lakshmi, 2002) as cited by (Ustad, 2010)

Most of the literature review supports that financial benefits have been considered as one of the most important driver behind implementing ESPs in the hotel industry.

Customer Demand

The environmental attitude and environmental knowledge of customers have significant role on their decision to visit at environmental friendly hotel (Gustin & Weaver, 1996). Ccustomers who are worried about environmental problems choose to select green hotels in comparison to other hotels and this demand proves a great motivational factors for role players to go green (Kirk, 1995; Foster, et al., 2000) . In consistent (Bohdanowicz, 2005) found customer demand as second most influential factor after cost reduction in adopting the environmental sustainability in hotels. According to (Chan & Ho, 2006; Jauhari & Manaktola, 2007) as cited by (Hays & Ozretic-Došen, 2014), customers prefer to choose accommodation with more pro-environmental initiatives when deciding between two equal hotel properties. Now customers are more conscious about environmental problems and subsequently

demanding for environmental sustainable action during their holiday staying in hotels. Gil, et al. (2001) in their study found that 43 million ecological tourist from USA and 10 percent from Spain are prepared to pay additional money for the environmental sustainable actions of hotels. In consistent (Kang, et al., 2012) said that some customers are all set to pay extra even for the small sustainable actions of hotels like, separate recycle bins, low water shower heads, and solar energy. The study of (Baker, et al., 2014) stated that hotels are recognizing the changes in customers' preferences and they must value the environmental consciousness of customers.

Stakeholder Pressure

Gil, et al. (2001) in their study of Spanish hotels found that environmental sustainable actions of hoteliers are driven by (1) an effort to improve the firm lawfulness and (2) in response to the pressure of stakeholders. They further added that effective implementation of ESPs is result of the environmental concern and demand of the stakeholders. The level of pressure of stakeholders depends upon (1) the power of stakeholders about environmental matters, (2) the use of power for the protection of environment and (3) the perceived financial benefits of implementing the environmental sustainable actions. Some similar studies (Banerjee, 2001; Yol Lee & Rhee, 2007) of other industries proved that stakeholder pressure is a significant external factor that forces environmental initiatives in organization. Some researches of hotel industry also supported that stakeholder like customers, government, suppliers and NGOs significantly affect the firm decision of going green. Kasim (2007) conducted his study in Malaysia and found government regulation as main driving force for Malaysians hotels for implementing ESPs in operation. According to (Park & Kim, 2014) in a study on hotels associated with U.S. state hotel association found that stakeholders' pressure was the greatest influential factor in moulding managerial attitude towards environmental sustainability

Top Management Role

Among several internal factors, the top management support is considered as vital factor for successful implementation of environmental management program (Anderson & Bateman; Bansal & Roth, 2000; Banerjee, 2001; Kasim, 2007). In

consistent (Quazi, et al., 2001) found in their study that the top management is more concerned for environmental issues in ISO 14001 certified organizations in comparison to the organizations that are not green certified. The support of top management is considered important because of two reasons: (1) the top management backing helps in the procurement of resources required for pro- environmental actions (2) environmental actions require coordination and collaboration of other departments and this support is easier to achieve if the decisions are implemented from the top management (Le, et al., 2006).

In addition, (Fineman & Clarke, 1996; Cordano & Frieze, 2000; Banerjee, 2001) found in their studies that managers' environmental beliefs, opinions, perception and expectation have substantial positive influence on senior most management in regard to implementation of the ESPs in their concerned organizations.

Managerial Environmental Attitudes/Concern/Awareness

Managers with great environmental concern adopt ESPs for the sustainability of environment, while managers with low environmental concern are financially oriented in going green (Hines, et al., 1987).The environmental attitude of managers and ethical concern plays an important role behind environmental actions of hotels mainly in case of small and mid-sized organizations where the policy making entirely a management decision.

Rondinelli & Vastag (1996) reported in their study that managerial environmental attitude decides the environmental management approach of the concerned organization. In consistent to the results of this study (Sharma, et al., 1999) stated that managerial environmental understanding of environmental issues affects the level of pro-environmental actions of a firm.

In a study of Spanish companies (Del Brio, et al., 2001) found that there is optimistic relationship among the level of managerial consciousness about the advantages and disadvantages of environmental programs and the formalization of environmental initiatives in an organization. Such awareness is associated with the independent environmental department and the appointment of dedicated staff for resolves the

environmental issues. According to (Tzschentke, et al., 2008) managers' environmental concern and awareness are driving factor in determining hotels' environmental initiatives.

In addition to the importance of managerial environmental perspective, literature also reported the internal conflicts of managers. In addition (McGee, 1998) reported different pressures of stakeholders on managers of a firm that affect the motivations levels and subsequently lead coordination and control problem. It was suggested that motivation level should be studied at the firm level rather than specific to a particular manager. However, leaving aside the contextual conflict of managers, the findings of literature review supports that managerial environmental attitude; concern and awareness play a significant part behind the pro-environmental actions of an organization.

Government Legislation, Support and Incentives

Main drivers behind implementation of ESPs also include government support by means of incentives, special tax exemption, provision of soft loans, sharing initial implementation cost of environmental sustainable technologies etc. (Kirk, 1995; Chong, et al., 2009; Kasim, 2009; Massoud, et al., 2009). According to (Kasim, 2009) incentives are one of the major motivational factors behind the environmental sustainable actions of firms. Edwards (2004) added that initial implementation cost of environmental initiatives is the main barrier in adopting ESPs in hotels and government incentives would determine the level of ESPs among the hotel industry. He further stated that, hotels in Caracao and small and medium hotels of Bahamas found it difficult to implement sustainable actions in daily operations due to absence of incentives from the government ruling authorities.

Government legislation in relation to sustain the environment put pressure on companies to consider the environmental concerns before taking decisions (Quazi, 2001). Some countries also offer recognition and incentive to green companies as a part of publicity to leave an impact on customers (Tzschentke, et al., 2004) . This study further added that legal obedience is the major cause behind the environmental sustainable actions of organizations.

According to viewpoint of senior managers of Taiwan hotel industry, the formulation of environmental policy is an easy task but the governments' direction, incentive and consultation is much more needed to properly implement the system (Chen & Chen, 2012).

The above examples submit that governments can guide the hotel businesses in both the positive or negative ways in relation to implementation of EMS in that country. It displays that government is an important external motivational factor that significantly contribute in motivating hotels to act proactively in decreasing their harmful effect on the surrounding environment

Type of Organization

Type of organization plays an important role behind the environmental sustainable actions. Murphy, et al. (1995) found that bigger organizations usually have more formal environmental management system set by managers. The internationally affiliated/franchise/chain and larger organizations are found more environmental friendly than smaller organizations because of predefined environmental strategies and adequate financial support (Bohdanowicz, 2005; Massoud, et al., 2009) . The hotel size is assessed by the number of rooms/employees or annual turnover and size of an organization is the one of the vital variable that significantly effects the pro-environmental actions of a firm. The determinant reasons between positive relationship of company size and the pro-environmental actions are many; (1) larger companies leave greater negative influences on the environment in comparison to smaller firms and thus receive more pressure from the stakeholders to adopt green practices; (2) larger companies have abundant financial resources to spend in green technology that is otherwise considered costly at the initial implementation stage; (3) pro-environmental initiatives of larger companies have significant positive affect on the environment and difference is notable (Gil, et al., 2001; Tzschentke, et al., 2004).In consistent (Tzschentke, et al., 2004) also added that environmental sustainable initiatives decrease significantly in accordance to company size.

In other words, it can be summarized that larger hotels can afford bigger investments. The availability of resources is much easier and thus adopt green concept easily.

Multinational companies are more committed towards environmental management according to following studies:

- There is rapid knowledge transfer between different concerned organizations, multinational companies about new concepts (Dunning, 1995; Gupta & Govindarajan, 2000);
- Similarly (Shapiro & Magretta, 1997) stated that in many countries systematic environmental policies leads to more pro-environmental behavior and multinational companies circulate their environmental policies between all firms to meet the prevailing requirement of the concerned countries;
- All the companies in the international group might not be large and are affected in positive and negative relation from the owing corporate experience; larger availability of resources and more pressure from the economic and social atmosphere.

In accordance to these results (Christmann & Taylor, 2001) in his study confirmed that there is more compliance of environmental regulations by multinational companies and the possibility of certified from ISO 14001.In a study of proactive environmental strategies (Buysse & Verbeke, 2003) reported the strong relation between multinational firms and pro-environmental actions. These researchers found that most of the environmental sustainable leaders belonged to multinational companies. Gil, et al. (2001) observed the same relationship in Spanish chain affiliated hotels that are part of multinational group or large corporative and reported more pro-environmental behavior of these organizations in comparison to small and independently owned hotels.

A through literature review remained helpful to identify the variables for measuring the motivational factors for this study. The above mentioned factors along with some other factors were selected for measuring the managerial perspective in this study. The details of the final variables are provided in chapter three.

2.9.2. Barriers

Barriers are circumstances that prevent people to work for a required action. Previous researchers have classified these factors as in-house and external in context to the

application of ESPs (Baumast, 1997; Hillary, 1998). Hoteliers recognized these factors as; lack of knowledge about environmental issues, lack of pro-environmental attitude, deficiency of experienced human resource, initial implementation cost, and non-cooperation from customers, exiting non supportive infrastructure, lack of required legislation, difficult and costly process of accreditation.

Lack of Knowledge

Many benefits are linked with the application of ESPs but still many hotels are not adopting and implementing this concept. Hillary (1998) stated that little knowledge of environmental problems and existing environmental policies in association with lack of information and support regarding the execution of green initiatives has been found major hurdle in implementing ESPs especially in small and medium size organizations. According to (Tzschentke, et al., 2008) small hotel organizations are not aware about their carbon footprints on the environment and this lack of awareness have been working as a barrier in adopting ESPs in the operation. A book by (Bergin, 2010) reported that hotel businesses are lagging in adopting the green idea because environmental knowledge is not a part of curriculum in hospitality courses, he further recommends introducing the environmental sustainable knowledge in the curriculum of hospitality management courses, if the hospitality management students are provided with environmental knowledge, they could behave as more pro-environmentalist.

In addition (Kim, et al., 2015) stressed on providing the environmental sustainable training to workers so that they can recognize the significance of implementing these practices. Hotels are also recommended to provide skill and knowledge to the guests to increase their active participation in ESPs (Cárdenas, et al., 2015).

Lack of Positive Managerial Attitude towards Environmental Sustainability

Kirk (1995) observed that, if an organization want to implement environmental sustainability concept, its support should come from top management otherwise this concept could not be implemented effectively. Brown (1996) said that environmental sustainable practices can be executed effectively only if these practices are made the

integral part of performance appraisals of general managers of the hotels. The managerial attitude plays a significant role in implementing ESPs in organizations as some managers do agree that hotels have negative effects on environment but implementation of ESPs is restricted to cost saving benefits only (Brown, 1996). Managers still work in conventional way and do not consider environment as a necessary factor for tourism growth. Environmental policies are considered as an add-on of corporate policy. Enz & Siguaw (1999) stated that separate positions should be created for environmental administration in context to proper implementation of the program. In consistent, (McDonough, 2008) in his study found the lack of environmental attitude in the hotel owners, managers that hurdles the adoption of environmental sustainability concept. According to (Robinson, 2000) as cited by (Doody, 2010) the reason of slow response of businesses to environmental issue is that some managers are not ready to be involved in such work that require approvals and so they do not suggest their owners for innovative and active initiatives. Leondakis (2009) recommended proper training and communication to concerned staff regarding policies and procedures of ESPs.

High Cost of Implementation and Green Accreditation

The initial implementation and maintenance cost of environmental sustainable actions is the most reported barrier in many previous studies. It is to state here that whether or not a company certifies itself from green certifying agencies, the money, time, staff and other implementation cost remains same as continuous expenditure for the proper execution of environmental sustainable program.

The small organizations afraid to implement these practices as they believe that the operational cost could not be charged from customers as they are not prepared to pay extra amount for green services of hotels (Kirk, 1995).

In consistent (McNamara & Gibson, 2008) found high initial cost as major barrier in implementing the ESPs in addition to existing building structure.Tzschentke, et al., (2008) found that carrying out of green practices is centered on impact assessments, green accreditation and carrying out regular environmental audits, which are associated with huge investments and managers that are facing financial crisis, find it

difficult to introduce green concept in their concerned organizations. Similarly (Chan, 2008) found that the implementation of environmental sustainable initiatives imposes huge financial burdens on the organizations and this burden remains continuous in effectively carrying-on of these initiatives.

This high initial cost of incorporating ESPs provides financial benefits in long run (Micioni, 2009). The ultimate results are financial benefits but it is hard for businesses to invest money at present. High implementation cost is associated with the customers' demand of high-end luxury and facilities in terms of green operations. This problem can be sort out by starting with small changes initially and gradually incorporating larger changes. These changes should be incorporated to make the environment better where the hotels exist. Butler (2008) in his research says that green constructions also leave positive affect on the wellbeing and efficiency of employees.

Many managers consider implementation of ESPs as a costly process rather than cost cutting opportunity.

Lack of Customer Demand

Another major barrier in going green is the lack of demand from customer side. According to (Butler, 2008) customers' demand for green services can directly influence the hoteliers' intention to go green. Many hospitality industries are waiting for raise in customer demand for green services as yet majority of customers are not aware about the sustainable initiatives of hotels, they are staying in (Han, et al., 2010).

Barsky (2008) found in his survey that the luxury guests are more concerned about the green initiatives of the hotels in comparison to guests who are looking for economy hotels. The results of this survey indicate that guests are not prepared to spend additional money for the environmental sustainable actions of hotels. Price is the main factor while deciding between two similar hotels.

The results of (Barsky, 2008) study is in contrast of (Barker, 1996) research, who reported that some guests actually demand environmental sustainable actions of hotels and even are ready to pay additional for these actions. In consistent (Barnes, 2007) also reported in his study that instead of significant numbers of customers who cares for price, the environmental sensitive customers understand the need of implementing green practices by hotels and ready to spend extra money for the sustainability of environment for future generations.

Many customers associate green hotels with lack of luxury services. Green initiative of linen reuse is often linked to cost cutting tool of concerned organizations and affect guest's decision to pay more or choice of stay in an accommodation. Hotels' guests expect to receive luxury services during their stay like 24 hours running hot and cold water; high force showers heads; clean and crisp linen and fresh stock of towels on daily basis (Kirk, 1995). He further suggested that introduction of green practices must be incorporated with the consent of the guests and without compromising the level of services. Tzschentke, et al. (2008) found that some hotels hesitate to apply the green practices in operations as they think this may have negative effect on their organization as many guests associated the green initiatives with drop of luxury services.

Existing Infrastructure

One of the main barriers faced by the exiting hotels while implementing the ESPs is the present infrastructure. The majority of hotels that were built in last decade did not give a thought to the environmental sustainability during construction, due to lack of environmental knowledge of architectures and developers. The other reason of non-incorporation of green methods was the cost of green construction. According to (Butler, 2008) the cost of constructing the green building goes up to 10-15 percent in comparison to conventional construction. In addition (Barnes, 2007) reported in his study that non availability of professional like architectures, engineers, vendors, housekeepers and managers that have the knowledge the environmental issues, sustainable systems, sustainable products and technical sustainable procedures are

obstructing the introduction of green initiatives. The cost and availability of environmentally friendly products is also a barrier. The green cleaning products are also associated with the lower cleaning quality.

Government Initiatives by Legislation and Incentives

In a survey of European hotels (Bohdanowicz, 2005) found the absence of government support and financial incentives that was slowing down the pro-environmental actions of hoteliers and suggested the incorporation of incentives like tax break to widen the concept of environmental management among the hotel organizations.

Chan (2008) reported in his study that some hotels have got certification from ISO 14001 while other majority of hotels are still to be certified by green agencies**.** In consistent (Massoud, et al., 2009) in their study in Lebanon found that the nonexistence of government support and lack of demand of stakeholders in association with the fact that green certification is not a pre-condition for operating the business is the key barrier factors in the adoption and execution of green concept among the hotel organizations. Similarly (Cook, et al., 2017) mentioned in his study that proper implementation of sustainable practices require close working relationship between government and private organizations. Government should use tourism tax to mitigate the adverse effect of tourism on community, environment and economy.

Based on the findings of previous studies, some important barriers were identified and have been studied in this research from the perspective of hotel managers. The above mentioned factors along with some other factors were selected for measuring the managerial perspective in this study. The details of the final variables are provided in chapter three.

2.10 Green Certifying Agencies

Hotel industry leaves many impacts on environment whether directly or indirectly and this has evoked the need of certified hotels to sustain the environment. The trend of going green has attracted increasing figure of agencies that provide green certification

to the hospitality industry. The purpose of getting eco- certification or accreditation is to find out the best suitable green product or services and to ensure the more sustainable management and consumption of resources (Font & Buckley, 2001) . (Green Hotels Association, n.d.) identified 800 different associations that provide certifications to hospitality, tourism, ecotourism around the world.

The following agencies are main players in the world that provide guidance for environmental actions of hotels. Some agencies evaluate and monitor the green actions of hotels and provide certification accordingly for hotel industry:

Green Globe/Green Globe 21

This agency is based in California and formed by World Travel and Tourism Council (WTTC) in 1994.It provides framework, through which environmental sustainability could be implemented, evaluated, improved and gets certified. Green Globe not only provides certification to tourism operators but also to tourism destination. Green Globe includes 44 core criteria that have to be met for getting the certification. The primary focus of this organization was to conduct the environmental education and awareness programmers. In 1999 it also started giving accreditation on the basis of ESPs of the concerned organizations. The green accreditation is not limited to tourism and travel organizations but to other businesses also together with the destinations (Font & Harris, 2004).

Leadership in Energy and Environmental Design (LEED)

Established in 1990 in Washington D.C. and administrated by USGBC, LEED is a non-profit body that encourages green construction and enhances profitability while minimizing the negative environmental impacts (Council, 2014).LEED certification confirms that construction of the building has been done according to green concept, for example measures are being taken for energy conservation, water conservation etc. LEED provides two types of certification-(1) for existing buildings (2) for new constructions.

Buildings that seek LEED certification needs to meet some criteria set by the agency in the area of site selection, transportation, material, indoor air quality, water and energy efficiency etc. According to an understanding between Indian Green Building Council (IGBC) and USGBC, projects in India that require LEED certification need to register with IGBC first (from 1st July 2014 onwards). The projects that are already registered or approved by 'LEED India' and USGBC up to 30 June 2014, would be continued by IGBC till June 2018 (IGBC, n.d.).

The Indian Green Building Council (IGBC)

This agency is determined to widen the concept of green buildings in India. IGBC bring together that sustainable practice that reduces the environmental impact. They also certify the hotels that meet the minimum standard of ESPs in their organizations. IGBC certifies new building as well as existing buildings.

Green Seal

This is a pioneer nonprofit environmental certification agency established in 1989 and based in Washington D.C. It provides certification to hotels as well as to the products that are more environmental friendly in comparison to others.

Green Hotels Association

It was established in 1993 and based in Houston. It does not provide certification but hotels that want to solve the negative environmental impact can become the member. Agency provides guidelines to deal with different environmental issues.

Ecotel

It is one of the most recognized certification agencies that have promoted sustainability with a focus on environmental protection. It was established in 1994 and promoted by HVS (Hospitality Valuation Services).

Concept Hospitality Pvt. Ltd (CHPL)/ Ecotel Certification in India- CHPL was established in July 1996 in Mumbai. It is engaged in a Memorandum of Understanding (MoU) with HVS Eco Services (the agency that certifies the

environmentally sensitive hotels) to support development of ecotel hotels in Asia and predominantly in India. According to (Concept Hospitality, n.d.) Ecotel certification represents the 'Hallmark of Environmentally Sensitive Hotels'.

Ecotel Certification is mainly provided for five main areas;

- Environmental commitment
- Energy efficiency
- Water conservation
- Employees' education
- Water conservation and prevention

CHPL operationalizes the certification and help in marketing of the brand.

International Organization for Standardization (ISO) 14000

This is well-recognized global body, established in 1946 and provides guidelines on standards of environmental management operations. ISO 14000 provide practical knowledge to organizations and companies that seek to manage their environmental responsibilities. It helps hotels to effectively execute the environmental management systems, earn profitability, reducing negative environmental affect. Once the environmental management system is implemented in a company, a visiting team from ISO 14000 evaluates the entire program by measuring water and energy consumption, recycling actions etc.

International Hotel Environmental Initiative (IHEI)

IHEI helps in the green initiatives of the hotel organizations. It provides information to hotels about ongoing environmental trends and guides them to tackle the environmental issues. It provided practical guide to hotels to improve the environmental initiatives. (International Hotels Environment Initiatives, 1996) Provide a complete guideline to set up environment program in an establishment.

2.11 Summary

This section summarizes the review of literature on implementation of ESPs in hotel industry and its relationship between managerial environmental attitude, the role of top managers in adopting the green concept, motivational factors and barriers behind adopting ESPs in hotel business, main agencies providing certification to green and ecotel hotels.

The literature review on ESPs in hotel industry provided secondary data information for this study highlighting the type of ESPs implemented in other hotels, associated benefits, barriers and motivational factors behind adoption of concept. The literature review on the relationship of managerial environmental attitude and implementation of ESPs provided theoretical layout about how the managerial environmental attitude predict and affect the way of dealing with environmental issues. In an attempt to study the managerial environmental attitude based on characteristics of property, the similar previous studies were reviewed.

Sustainability has been considered as an important concept mainly in three dimension-economy, social and environment in many industries worldwide, but in relation to hotel industry, sustainability is mainly concerned with environment sustainable practices. The ESPs in this study are mainly concerned about the study of water consumption, energy consumption and waste management. Managerial attitude plays an important role while making environmental policies and significantly motivate the decision in implementation stage. Although the importance of implementing ESPs has been recognized by hotel industry, still many barriers are making the concept difficult to implement.

Chapter 3. Research Methodology

3.1. Introduction

Methodology is an important part of research studies. It serves as nerve center of research and adds meaning to research findings. Methodology includes the details of techniques and tools that have been used by the scholar to collect, organize, analyze and to interpret the data. It provides the detail of constructs and variables. This chapter is about the research methodology of this study and explains the details of

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methods and tools that were applied to achieve the basic objectives of this research study. The key objective of this research study was to find out the current ESPs implemented in the hotel industry of Punjab and to explore that whether the environmental attitude of managers have significant effect on the implementation of ESPs, along with exploring the managerial observed barriers and motivational factors behind the actual acceptance and execution of ESPs in the hotels. All the tools related to objectives of this study have been developed based on the scientific steps of research methodology. All the tools were run under normal situation and set up. Primary data was collected based on the responses sheets received from hotels.

This chapter is broadly classified into following sections:

- Objectives of the Study.
- Development of Research Hypothesis.
- Research Design and Procedures of Study.
- Survey Approach and Study Area.
- Population and Sample Frame.
- Research Questionnaire Design.
- Statistical Approach.
- Data Analysis Techniques.
- Summary.

The details of research methodology have been discussed below.

3.2. Objectives of the Study

The main objective of this study was to explore the reasons behind the slow progress of environmental sustainability concept among the hotel industry of Punjab. To achieve this purpose following objectives were finalized:

- To identify the existing ESPs implemented in the hotel industry of Punjab.
- To measure top managers' attitude towards ESPs.

- To examine relationship between attitude of hotel managers and the number of ESPs implemented in their hotels.
- To measure managers' observed factors that pushes implementation of ESPs in the hotel industry of Punjab.
- To measure managers' observed barriers in implementing ESPs in the hotel industry of Punjab.

3.3. The Development of Research Hypotheses

In this section, at first the hypothesis for identifying the ESPs is purposed based on the characteristics of hotel like number of rooms of hotel, size of hotel, category of hotel, ownership of hotel and tariff/financial position of hotel.

Secondly, the hypothesis for measuring the managerial environmental attitude is developed based on the characteristics of hotel like number of rooms of hotels, size of hotel, category of hotel, ownership of hotel and tariff/financial position of hotel.

In the third step, the hypothesis is purposed to measure the relationship between managerial environmental attitude and the implementation of ESPs in the concerned sample hotel.

Finally, managerial observed barriers and motivational factors behind adopting and implementing ESPs are measured.

3.3.1. Hypothesis for Objective 1 (To Identify the Existing Environmental Sustainable Practices Implemented in the Hotel Industry of Punjab).

ESPs were identified based on the following characteristics of hotels;

ESPs Based on the Number of Rooms/Size of the Hotel

The small enterprises reported limited responsibility, due to perception that their impact on the environment is negligible (Holland & Gibbon, 1997). Larger organizations generally possess access to more financial resources that help to get hire the professional help and techniques related to implementation of ESPs (Nohria,

1996). Moreover, small organizations face the problem of deficiency of time and money to investigate the results of environmental action and to hire the professional consultants (Hillary, 2000).

Larger hotels consume more energy and power and produce more waste. Most of the previous studies of ESPs have taken sample of larger hotels as it is supposed that these hotels are more pro-environmentalist in comparison to small hotels (Mensah, 2007).He further stated that larger hotels are forerunners in having formal environmental sustainable policy and adopting the ESPs in the business. Such polices were focused on green, safe and responsible environment. According to (Park, 2009) the rate of implementation of ESPs in hotels go up in accordance with the more number of rooms. Upscale and large hotels (having more rooms) are found to have more ESPs in comparison to small hotel businesses. Erdogan & Baris (2007) reported in their study of hotels in Turkey that environmental concern of hotels depends upon many variables like environmental attitude and knowledge of managers, size of hotel etc. In a study at Viennese (Raderbauer, 2011) found that larger hotel organization are more pro-environmental, active and anticipate more benefits from implementing ESPs in comparison to smaller hotel organizations. Lepoutre & Heene (2006) conducted their study on small size organizations and found that small organizations impose barriers on social responsibility of firm.

Based on these studies the following null hypothesis has been purposed:

H_{o1a}: There is no significant difference between environmental sustainable practices on the basis of number of rooms

ESPs Based on the Category of Hotels

Mensah(2006) conducted study in Accra region to explore the ESPs among different categories of hotels and reported higher classified hotels such as three star and five star were ahead in adoption and implementation of ESPs in the organization in comparison to smaller category hotels. In consistent (González, 2001; Raderbauer, 2011) found sustainability more related to higher category of hotels.

The following null hypothesis has been purposed to test the same relationship in this study:

H_{o1b}: There is no significant difference between environmental sustainable practices on the basis of category of hotel

ESPs Based On the Type of Ownership of Hotels

Rahman, et al. (2012) in their study in North America found that hotels that were chain affiliated adopted more of green practices in comparison of independent hotels as chains have clearly defined environmental policies that have positive proved results in other units. Adding to this (Bohdanowicz, 2006) stated that chain properties support individual units in following some set standards of green operations and also provide training to implement the environmental protection measures.

The following null hypothesis has been purposed to test the same relationship in this study:

H_{o1c}: There is no significant difference between environmental sustainable practices on the basis of type of ownership of hotel

ESPs Based on the Tariff/Financial Resources of Hotels

Many previous studies found that major barrier in implementing the ESPs is the high implementation cost (Doody, 2010). In consistent Ustad (2010) carried out his research study of hotels in New Zealand to explore the environmental sustainable management and reported that the main barrier in going green was high cost of getting green accreditation. Hotels earn large revenue by means of room sale; the higher room tariff is related to more revenue or financial resources available to hotel. The reason behind the more pro-environmental initiatives in larger organizations, likely to be connected with availability of more financial resources to meet the initial implementation cost of ESPs (McNamara & Gibson, 2008). Similarly (Anglada, 2000; Hitchens, et al., 2005) observed that organizations that face lack of finances are reported with lesser involvement in the implementation of ESPs.

Therefore, following null hypothesis has been constructed keeping in view the findings of previous research studies:

H_{o1d}: There is no significant difference between environmental sustainable practices on the basis of tariff of rooms

In conclusion the ESPs were measured based on the characteristics of hotels like: number of rooms (size of hotel), category of hotel, type of ownership of hotel, tariff of rooms (financial resources of hotels) and above mentioned four hypotheses were developed to achieve the objectives of this research study.

3.3.2. Hypothesis for Objective 2 (To Measure Top Managers' Attitude towards Environmental Sustainable Practices)

Managerial environmental attitude was measured based on the following characteristics of hotel businesses:

Managerial Environmental Attitude Based on the Number of Rooms/Size of The Hotel

Deng, et al. (1992) observed from their study of Canadian hoteliers' attitude that small hotels were more resistant to adopt the ESPs because of thought that it might obstruct their business. In addition (Mensah & Blankson, 2014) conducted their study in Accra in Ghana and found that managers of large and upscale hotels were more dedicated towards environmental sustainability by having dedicated staff, written environmental policy, environmental action plans and eco labelling and green accreditation. The owner or managers of small firms were often found to have lack of time (Gerstenfeld, 2000; Hitchens, et al., 2005) and knowledge (Holland & Gibbon, 1997; Anglada, 2000) to pay attention to environmental issues and develop positive pro-environmental behavior. According to (Hitchens, et al., 2005) regardless of managerial environmental concern, some small organizations do not adopt ESPs and reluctant to receive the advice in this regard.

The literature review reported that a managerial environmental attitude varies depending upon the number of rooms/size of the hotels. In view of the previous findings the following null hypothesis has been proposed:

H_{o2a}: There is no significant difference between attitude of managers on the basis of number of rooms.

Managerial Environmental Attitude Based On the Category of Hotel

Tsai (2014) reported the findings of analysis on green features of hotels like; energy saving, waste management, water conservation, green buying, corporate social accountability and managerial environmental attitudes in Taiwan. They observed that managers of upscale and expensive hotels have more positive pro-environmental attitude than the managers of lower category of hotels. In consistent (Mensah & Blankson, 2014) also found a positive association among the higher category of hotel and higher pro- environmental attitude of managers.

The following null hypothesis has been proposed to evaluate the same relationship in this study:

H_{o2b}: There is no significant difference between attitude of managers on the basis of category of hotels.

Managerial Environmental Attitude Based On the Type of Ownership of Hotel

Bohdanowicz (2005) conducted a large scale study on 600 European hotels to explore the environmental attitude and observe more environmental concern in the managers of chain affiliated hotels than independently owned hotels. In addition (Bohdanowicz, 2006) in her study of 610 European hotels found that corporate environmental policy significantly affect the managerial environmental attitudes in hotels. According to (Rashid, et al., 2004) different organization culture has different effect on environmental attitudes of employees and prepares them for change or not to change.

The literature review reported that managerial environmental attitudes vary depending upon type of ownership of the hotels. In view of the previous findings the following null hypothesis has been proposed:

H_{o2c}: There is no significant difference between attitudes of managers on the basis of type of ownership of hotel.

Managerial Environmental Attitude Based On Tariff/Financial Resources of the Hotel

According to (Doody, 2010; Ustad, 2010) the main barrier behind adopting and implementing ESPs is found as high implementation cost and costly green certification. Chen, et al. (2011) conducted their study in China and found that financially stable people have more positive environmental attitude. High tariff of hotel is associated with the more revenue to the organization that may affect the pro-environmental attitude of managers.

The same relationship is tested in this study by following null hypothesis:

$Ho2_d$: There is no significant difference between attitude of managers on the basis of tariff of rooms.

In conclusion, the managerial environmental attitudes were measured based on the four main characteristics of hotels; number of rooms (size of hotel), category of hotel, type of ownership of hotel, tariff of hotels (financial resources of hotels).

3.3.3. Hypothesis for Objective 3 (To Examine Relationship between Attitude of Hotel Managers and the Number of ESPs Implemented in Their Hotels)

Environmental sustainability is a significant issue in hotel organizations in recent times. The identification of ESPs in this study is mainly concerned with the energy saving practices, water saving practices, waste dealing programs and overall environmental sustainable action of the hotels. The implementation of ESPs is mainly related to the managerial environmental attitudes. Specifically, in context of hotel industry the managerial environmental attitude is found to have a great impact in the effective implementation of ESPs in the organizations.

Ayuso (2006) stated that even if the top management have little knowledge of organizational involvement in environmental sustainability, hotels are applying voluntary ESPs because of customers' and managerial pro-environmental attitudes.Many previous studies (Céspedes-Lorente, et al., 2003; Best & Thapa, 2013;

Hall, et al., 2016) have identified the positive relationship between hoteliers' environmental attitude and level of implementation of ESPs in the organization.

In the view of previous studies, following null hypothesis has been proposed to explore the relationship among managerial environmental attitude and application of ESPs in the Punjab hotel businesses:

Ho3: There is no significant relationship between managerial environmental attitude and the number of environmental sustainable practices implemented in their hotels.

3.3.4. Objective 4. (To Measure Managers' Observed Factors That Pushes Implementation of ESPs in the Hotel Industry of Punjab)

Hypothesis was not developed for this objective. The result of observed motivational factors would be presented through descriptive statistics and mean ranking in addition to hypothesis results.

3.3.5. Objective 5. (To Measure Managers' Observed Barriers in Implementing ESPs in the Hotel Industry of Punjab)

Hypothesis was not developed for this objective. The result of observed barriers would be presented through descriptive statistics and mean ranking in addition to hypothesis results.

3.4. Reasons for Selecting Objective 4 and objective 5 (Differences of ESPs Based on Different Barriers and Motivational Factors)

The previous studies have observed the significant effect of barriers and motivational factors on the actual implementation of ESPs in an organization. Keeping in view the results of past studies it was found useful to study the managerial observed barriers and motivational factors in addition to exploring the impact of managerial environmental attitude held on the rate of implementation of ESPs.

Barriers such as weak legislation, ineffective laws, initial implementation cost, low top management commitment, existing non-supportive infrastructure, little cooperation from guests, lack of awareness of concept, complicated and costly certification process, change of routine were identified for this study with the help of the thorough review of literature. The results of some previous studies regarding barriers are as follows;

Alexander & Kennedy (2002) identified in his research that change of routine according to new environmental policies is difficult to incorporate and it takes time. In consistent (McNamara & Gibson, 2008) in their study at coastal accommodation sector in Australia found that major barrier was existing infrastructure that does not support major environmental initiatives followed by uncooperative guest. In addition (Ustad, 2010) explored high cost of green certification a major barrier in his research. Raderbauer; Saenyanupap (2011) found lack of support of government and top management most influential barrier that produce hurdle in implementation of ESPs and (Dernbach & Mintz, 2011) suggested to use law for integrated sustainability decisions. The areas under the preview of strict environmental legislations are found with more pro-environmental initiatives than other areas that are lacking such strict compliances of environmental laws. In a study of barriers to green manufacturing (Mittal & Sangwan, 2014) found weak legislation and lack of knowledge most important barriers in green initiatives. In a study of Kaula-Lampur (Fukey & Issac, 2014) found limited sustainability practices among small and medium establishments due to lack of knowledge of green concept.

Motivational factors such as top management support, legislation, customer demand, reduced cost, Government incentive, brand image, increased market share etc. have been identified from the thorough review of literature. The results of the following studies support the significance of these factors;

Many previous research studies also reported the similar motivational factors such as incentives, special tax exemption, provision of soft loans, establishment of regulations, reduced cost, financial gains and support from top management (Kirk, 1995); (Massoud, et al., 2009; Chong, et al., 2009; Kasim, 2009).

Kirk (1995); Bohdanowicz (2005); Park (2009) found in their research, the financial gains as most influencing factor for hospitality industry followed by demand from customer and improved hotel image. According to (Kirk, 1995; Foster, et al., 2000); environmentally concerned customers prefer to stay at green hotels in comparison to other hotels and this demand proves a great motivational factor for role players to go green. Chen (2012) stated that according to hotel managers the formulation of environmental policy is an easy job but the government's direction, recognition and consultation is much more required for proper implementation of the system. Fraj Andrés (2009) in

their study at Spanish industrial firms explored that managerial perception about ecological concern directly influences the environmental action of firm. Thus employees need to be trained and rewarded for their contribution towards implementing ESPs in the organization.

3.5. Hypotheses Relationship to Research Questions in the Study

The tables below describe the relationship of hypotheses to research questions with the expected sign in the study:

Research question 1: What are the existing ESPs implemented based on each of the following characteristics of hotels:

- Size of Hotel
- Category of Hotel
- Ownership of Hotel
- Tariff of Hotel

Table 10: Hypothesis Relationship to Research Question 1

Dependent Variable	Hypothesis	Independent variable	Expected Sign
ESPs	Ho1a	Size of Hotel	+
ESPs	Ho1b	Category of Hotel	+
ESPs	Ho1c	Ownership of Hotel	+
ESPs	Ho1d	Tariff of Hotel	+

Research question 2: What are the attitudes of managers towards ESPs based on each of the following characteristics of hotels?

- Size of Hotel
- Category of Hotel
- Ownership of Hotel
- Tariff of Hotel

Table 11: Hypothesis Relationship to Research Question 2

Dependent Variable	Hypothesis	Independent variable	Expected Sign
Managerial Environmental Attitude	Ho2a	Size of Hotel	+
Managerial Environmental Attitude	Ho2b	Category of Hotel	+
Managerial Environmental Attitude	Ho2c	Ownership of Hotel	+
Managerial Environmental Attitude	Ho2d	Tariff of Hotel	+

Research Question 3: Is there any relationship between managerial environmental attitude and the number of ESPs implemented in their hotels?

Table 12: Hypothesis Relationship to Research Question 3

Dependent Variable	Hypothesis	Independent variable	Expected Sign
ESPs	Ho3	Managerial Environmental Attitude	+

Research Question 4: What are the motivational factors behind the implementation of ESPs?

Table 13: Research Question 4 Relationships with Implementation of ESPs

Dependent Variable	Hypothesis	Independent variable	Expected Sign
ESPs	NA	Motivational/Motivational Factors	+

Research Question 5: What are the barriers in implementing the ESPs in hotel industry of Punjab?

Table 14: Research Question 5 Relationships with Implementation of ESPs

Dependent Variable	Hypothesis	Independent variable	Expected Sign
ESPs	NA	Barriers	_

3.6. Research Design and Methodology

Research design is supposed to fulfill the following purposes:

- To provide a complete strategy before the actual data is collected (Singleton, et al., 1993).
- To enable researcher to draw inferences relationship among different variable of study (Nachmias, 1976).
- To keep the variations under control and provide the answer to research questions of study.

According to (Wu, 2003) the research process comprise of following stages:

- Literature Review
- Theoretical Background
- Construct & Variable Identification
- Variable Operationalization
- Data Collection
- Method of Data Collection
- Database Investigation
- Data Analysis.

Each stage is described below in relation to this study:

Literature Review

Literature review included the previous studies that focused on importance of tourism to destination, definition of environmental sustainability and environmental attitude,

ESPs prevalent in other hotels, barriers and motivational factors behind going green and relationship of managerial environmental attitude with implementation of ESPs. In addition to this some specific literature and studies were also reviewed that focused on environmental conditions, type of tourism and tourism policies in the survey state Punjab.

Theoretical Background

This research addresses an unexplained area of dull growth of green hotels in Punjab that received little attention earlier. The second step was to build a strong theoretical foundation to construct the research questions for this study. Many previous research studies have reported the role of managerial environmental attitude behind the actual environmental sustainable actions of the firms. This study tried to test the same theory that is, the relationship of managerial environmental attitudes and Implementation of ESPs in the context of Punjab state. This study utilized self-constructed quantitative research questionnaire (based on literature review) to collect the responses and to evaluate the hypotheses of this study.

Construct & Variable Identification

The identification of construct and independent and dependent variables is a careful research process. This study identified and finalized the constructs & variables through literature review, theoretical foundation and the pilot study of research questionnaire. The recent data collection during 2018-19 makes this research immediate useful for hoteliers, policy makers and other concerned people.

Variable Operationalization

In the context of this study the identified variables are defined by the following operational definitions:

(a) Attitude

Operational Definition- Attitude is managerial attitude towards environmental issues and implementation of environmental sustainable practices in the classified hotels of Punjab.

(b) Implementation

Operational Definition- Actual practice of environmental sustainable practices in the classified hotels of Punjab.

(c) Environmental Sustainable Practices

Operational Definition- Actual implementation of environmental sustainable practices under four dimensions; energy, water, waste and overall explored in the classified hotels of Punjab.

(d) Hotels

Operational Definition- All classified hotels (49) of Punjab that were registered with Hotel & Restaurant Association of North India (HRANI, north wing of FHRAI) and 39 other hotels of repute having more than 10 rooms in the property.

The aim of this step was to find out the way of measurement of the identified variables. The thorough review of literature provided the base for operationalization of variables. Face validity of each variable was measured.

Data Collection

This stage involved the data collection for the testing of research hypothesis. The collection of data involved two methods; first, online by email and second through the personal contact with the hotel managers and executives. The hotels were taken from HRANI website (49 hotels) as well as based on judgmental sampling technique (39 hotels).

Method of Data Collection

This research study selected survey method for the testing of the hypotheses and to answer the research questions. According to (Fowler Jr, 1993) the survey methods are most suitable to test the hypotheses developed from theory. The survey was chosen to develop the general ability rather than contextual realism that has already been achieved by previous similar case studies. Most of the researches focus on collecting attitudinal, behavioral and factual data. Survey technique by means of qualitative and

quantitative techniques helps to get the same data (Kerlinger & Lein, 1986).He further added that survey method helps to collect the larger information from more population in economic ways. The information collected by survey method is almost correct as the research questionnaire is specially developed in context to research questions (Slater & Narver, 1995).

However, some disadvantages are associated with the survey technique of data collection: First, the unwillingness of respondent that results in non- response error, that can invalidate findings of the research (Kanuk & Berenson, 1975).

Second is the ability of respondent to recognize the aim of the research study and provide the correct information. Linsky (1975) in his study advised to choose the respondents that have experience and knowledge of the subject of research study.

Third, the respondents may provide the preferred answers as per the wish of researchers and affecting the accurateness of the study (Dillman, 1972).

However, these limitations can be minimized by careful planning during the development of survey research questionnaire and collecting data like; use of simple and clear language, keeping the research questionnaire short, collecting data in short period of time, avoiding suggestive answers during the personal collection of data etc. These points have been taken care for this study also.

Investigation of Data

After collection, data was investigated to check for any error. Afterwards the coding and editing was done and then pretested to check whether data is suitable for the test of this study.

Data Analysis

The hypotheses related to managerial environmental attitude and ESPs were tested using the ANOVA and Tukey's HSD; Cluster Analysis; Factor Analysis and Multiple Regressions. Kendell's W was applied for measuring barriers and motivational factors in the final stage. The detail process and results of data analysis is discussed in chapter 4.

3.7. Population and Sample Frame

Banerjee & Chaudhury (2010) in their study defined population as a complete group about which some information is required to be discovered. The selection of population is generally based on research questions that help to define the concerned population in terms of location and restriction to age, sex and particular occupation. Further (Banerjee & Chaudhury, 2010) stressed on selecting the population with almost care so that those to be included and excluded are well defined. (Best & Kahn, 2009) described population as a group of people that have one or more characteristics in common and remain under the area of interest of researcher. Generally, researches are done for the benefit of the population.

The primary purposes of the researches remain the development of knowledge or principles that have universal acceptance and application. But, to study the whole population with an idea to develop generalization would be impractical if not impossible. Grounded on the dynamic nature of population, it is assumed that characteristics of population would change over the time. According to (Smith-Sebasto, 2000) population should be studied at the time of research and that time frame should be reported in study.

After finalizing the construct and variables of the study, through consideration was given to decide that whether the entire population is to select for responses collection or a sample frame is to be put. The entire population includes all the classified hotels located in Punjab.

The next thought was to select the hotels that were formally classified by HRACC. In India hotels enjoy voluntary decision to get classification from HRACC, Ministry of Tourism. Most of the hotels classify themselves according to facilities and services

provided to customers. In Punjab there are only eight hotels which are classified by HRACC (as on 10th March 2019). The data from eight hotels was not enough to develop the generalization of result.

Finally, a list of hotels was taken from HRANI website by including all the classified hotels registered with the organization in 2018. In addition to the census of hotels that was taken from the HRANI website that was 49 hotels altogether, 39 addition hotels (having more than 10 rooms) were selected on judgmental sample technique to collect the more response for generalizing the results more accurately.

The objective of this research study was to collect the maximum responses from concerned categories of hotels and to find the differences of managerial environmental attitude and ESPs based on the specific characteristics of the hotel as mentioned in hypotheses (3.3). It was expected that hotels with different characteristics would demonstrate different level of environmental attitude and implementation rate of ESPs. This research is expecting to collect standardized and discrete data that would enable the testing of research hypothesis.

About HRANI- This association is working as north wing of Federation of Hotel & Restaurant Association of India (FHRAI).

FHRAI is very reputed association of hospitality industry in India. It was established in 1955 with the commitment of the progress of hospitality industry through education, training, professional help, research and publications. It provides an interface between industry, government and stakeholders.

FHRAI is supported by the following four regional associations in North, South, East and West:

Hotel & Restaurant Association of North India (HRANI) (FHRAI, n.d.)

This wing started working with 27 members in 1950 and today grown to approximately 1500 members that have 800 hotels,600 restaurants and 100 associations from entire north India including nine States -Delhi, Rajasthan, Jammu&

Kashmir, Haryana, Punjab, Uttar-Pradesh, Uttrakhand, Himachal Pradesh, and Chandigarh (FHRAI, n.d.)

South India Hotel & Restaurant Association (SIHRA) (FHRAI, n.d.)

This wing was founded in 1955.It covers five states and two union territories: Andhra Pradesh, Kerala, Telangana, Karnataka and the Union Territories of Lakshadweep, Puducherry and Tamil Nadu (FHRAI, n.d.) .

Hotel & Restaurant Association (Eastern India) (FHRAI, n.d.)

It was established in 1961 and covers 12 states and one union territory: Andaman & Nicobar Islands (Union Territory), Arunachal Pradesh, Assam, Jharkhand, Mizoram, Bihar, Manipur, Meghalaya, Odisha, Nagaland, Sikkim, West Bengal. and Tripura (FHRAI, n.d.).

Hotel & Restaurant Association (Western India) (FHRAI, n.d.)

It was established in 1950 and served for the interest of Hotels & Restaurants in the area. It covers five states and two union territories; Dadra and Nagar Haveli (UT), Daman and Diu (UT), Maharashtra, Goa, Madhya Pradesh, Gujarat and Chhattisgarh (FHRAI, n.d.) .

A census of all the classified hotel (one star-luxury hotels providing five star deluxe facilities) registered with (HRANI) was taken from different cities of Punjab, which accounted for 49 hotels in all categories. Emails of all the hotels were collected from HRANI website. 39 hotels of repute (having more than 10 rooms) were taken on convenience sampling technique to increase the rate of responses. Thus, total hotels were 88 from all over the Punjab.

The census method was finalized for this study because of limited number of classified hotels in the state. The research questionnaires were distributed to respondents with the help of email or personal contact to the targeted hotels.

The objective of the study was conveyed to participants telephonically or personally before presenting the research questionnaire.

3.8. Research Questionnaire Design

The one of the main challenge of survey method is to develop the good research questionnaire that can measure the observable factors with due reliability and validity. The research questionnaire can be finalized in two ways. In the first way researcher can construct the research questionnaire specifically for the study in accordance to research questions. In the second way research questionnaire is selected from the previous similar studies. In most of the research studies, existing instruments are used and in the case where constructs are different from previous studies, a new instrument is constructed to measure the responses.

Churchill Jr (1979), as cited by (Wu, 2003), defined the development of research instrument in the following steps:

1. Selection of domain to build constructs.

2. Identify the variables to correctly measure the constructs.

3. Back translation (if applicable).

4. Pilot study with respondents.

5. Amendment and removal of non-suitable variables.

6. Construction of final research questionnaire.

7. Actual survey with research questionnaire.

8. Measuring reliability and dimension ability using factor analysis or Cronbach's Alpha.

9. Final specification of research questions used to operationalize the construct

This study used the quantitative structured research questionnaire for the collection of primary data. Research questionnaire was drafted based on studies of (Park, 2009; Ustad, 2010; Raderbauer, 2011).

The most of above mentioned steps of (Churchill Jr, 1979) have been followed for the research questionnaire of this study and are explained as below:

3.8.1. Selection of Constructs

Questionnaire measured five constructs:

- Basic information about the respondents and hotels.
- The managerial environmental attitude.
- Implementation of ESPs in the concerned hotel.
- Managerial observed barriers behind implementation of ESPs.
- Managerial observed motivational factors behind implementation of ESPs.

The constructs and dimensions mentioned above have been studied by different scholars in relation to study the ESPs of hotel industry. A thorough review of literature was done to find out the main domains for constructs and to finalize the variables for these constructs.

3.8.2. Identification of Variables to Measure Constructs

Literature review helped to find out the variables, which were used by earlier research scholars to measure the managerial environmental attitude, ESPs in the hotels, barriers and motivation factors behind the implementation of ESPs. Some of these variables were modified and some new were added to make the instrument suited for this research. In reference to content validity, total 95 variables were finalized to measure the above-mentioned constructs and dimensions. These variables were found appropriate to collect the required information in the context to the objectives of this study.

Variables were chosen with at most care to tap the construct as closely as possible. The selection of close ended questions was aimed to get the information for the objectives mentioned in above section.

3.8.2.1. The Variable of Construct (1) Basic Information about the Respondent and Hotel

The construct of basic information is measured with two dimensions: basic detail of respondent and basic characteristics of participating hotel

The variables chosen were mainly based on scale used by (Raderbauer, 2011).This construct has 14 variables, which measured basic information of the respondents and respondent hotels in the following way:

- Name of respondent
- Gender
- Contact number
- Email Id
- Designation
- Name of hotel
- City
- Category
- Number of rooms
- Age of hotel
- Type of ownership
- Type of hotel
- Tariff
- Type of clientele of hotel

Questions in this part were of multiple choices. The above mentioned two dimensions provided required information that was used to test the hypotheses one and two.

3.8.2.2. The Variable of Construct (2) the Environmental Attitude of Hotel Managers

This construct was developed to identify the managerial environmental attitude in the respondent hotels. This part explores the perception of hotel managers towards the environment. This part of the questionnaire was mainly based on New Ecological Paradigm (NEP) Scale (Dunlap, 2008).NEP is used by researchers at large scale to measure the individual's views on environmental issues and adopted by many researchers in their research studies such as (Kuhn & Jackson, 1989; Gooch, 1995;

Pe'er, et al., 2007) etc. The review of literature supported the validity of NEP scale. Most of the previous studies support the significant relationship of NEP scale scores and actual environmental actions. This scale is developed on the concept of delicate balance of nature, limited resources of earth and environmental problems that arise due to human behavior to dominate nature. Some changes were incorporated in the scale to make it specifically related to hotel industry. Likert scale with five points was found suitable to collect the responses of managers towards environmental issues where 1 represented strongly disagree and 5 represented strongly agree. The scale explored the environmental attitude of managers by asking questions about the impact of hotel industry and mass human activity on environment along with the views towards ESPs.

The variables of the construct of managerial environmental attitude before content analysis are listed as below:

- Environment helps to attract tourists to a destination.
- Mass humans' activities interfere with nature and it often produces disastrous consequences.
- Hotels have the right to modify the natural environment to suit their needs.
- Hotels are seriously abusing the environment.
- Hotels have plenty ways to sustain the natural resources if we just learn how to execute them
- Hotel industry should follow the laws of nature
- Hotel ingenuity will insure that we do not make the Earth un-livable.
- The so-called "ecological crisis" facing humankind has been greatly exaggerated.
- The Earth is like a spaceship with very limited room and resources.
- Humans were meant to rule over the rest of nature.
- The balance of nature is very delicate and easily upset.
- Humans will eventually learn enough about how nature works to be able to control it
- If things continue on their present course, we will soon experience a major ecological disaster.

- Certificated environmentally friendly hotel (eco-labeled) make a change on your hotel image
- Luxury and environmental friendliness could be combine/integrate
- Clients will be ready to pay more (because of the hotel environmental sustainable practices)
- By implementing environmental sustainable practices, it is possible to enchain a new type of clients
- Would you be ready to go for environmental certification?
- What do you think – would the hotel (hotel management, hotel owners) be ready to invest some money and time to become more environmentally friendly or even to get some official environmental certificate/label?

3.8.2.3. The Variable of Construct (3) Environmental Sustainable Practices

The review of literature was not proved helpful to get a pre-defined measurement scale to measure the ESPs of hotels. Some previous exploratory and descriptive studies measured the ESPs on categorical scales (Bohdanowicz; Mensah, 2006) while some studies adopted interval rating system to collect the information regarding ESPs (Gil, et al., 2001 ; Claver-Cortés, et al., 2007; Erdogan, 2007).

In this study ESPs have been measured by self-identified 39 variables which were taken from different research studies. These practices have been measured by Likert scales having five points where 1 represents to no extent and 5 represents to great extent.

The construct of ESPs has been measured through following dimensions:

(a) Energy Related ESPs

(b) Overall ESPs

(c) Waste Related ESPs

(d) Water Related ESPs

The variables for above mentioned construct and dimensions are listed as below:

The variables of Energy Related ESPs:

- Implementing renewal energy program (e.g. wind or solar Power)
- Double glazed vacuum-sealed windows
- Using energy efficient lighting
- Installs occupancy sensors or a key card control system in guest rooms to reduce in room energy consumption
- Energy efficient laundry
- Programmable thermostat
- Led exist signs
- Conducting an energy audit
- Fans installed in room and option to open windows for fresh air
- Laundry washing machines are run on full load
- Energy saving stickers are put at appropriate places in hotel

The variables of Overall ESPs:

- Using environmental friendly cleaning agents
- Having a written environmental policy
- Conducting an environmental audit
- Subscribing to a formal environmental certification program (such as ISO 14001 or EMAS or similar)
- Conducting staff training on environmental issues
- Educate guests on environmental sustainable practices
- Individuals are taking responsibility for environmental management
- No Volatile Organic Compound (VOC) paint

The variables of Waste Related ESPs:

- Donation/sale of leftover food to local organizations
- Sorting of waste according to type
- Donation/auction of hotel furniture
- Composts organic kitchen waste

- Refillable thermos flasks instead of mineral water bottles
- Goods purchased are of recycled material
- Refillable amenity dispensers used rather than individual bottles for bathroom amenities
- Stationary from handmade or recycled paper
- Laundry Paper/ Cloth bags rather than plastic bags
- Recycled Biodegradable Garbage Bags
- Pencils and not plastic pens
- Sewage treatment plant
- Purchasing goods in bulk

The variables of Water Related ESPs:

- Water efficient appliances
- Low flow shower heads
- Low flow or dual flush toilets
- Faucets aerators
- Rain water harvesting
- Implementing water efficient gardening programs (e.g. using treated water in garden irrigation or adopting xeric gardening techniques)
- Encouraging guest to reuse towels and bed linen

3.8.2.4. The Variables of construct (4) Motivational Factors

Fourth part was constructed to measure the respondents' observed motivational factors and benefits that motivate hotels to adopt ESPs. The items are majorly adopted from previous studies (Kirk, 1998; Bohdanowicz, 2005; Ustad, 2010; Raderbauer, 2011).

Total 13 variables were selected to measure this construct. Likert scale of five points was used for collecting information where 1 denotes strongly disagree and 5 denotes

strongly agree. The hotel Managers and executives were requested to report their view about the factors that can push the green practices in the hotel industry of Punjab.

The variables are listed as follows:

- To save environment
- Legislation
- Government incentive
- Reduced operational cost
- Demand of customer
- Improved public image
- An edge over competitor
- Improved relation with community
- Increased employee satisfaction
- Contributes to increasing market share
- Personal awareness of hotel manager
- Quality service in clean environment
- Top management support

3.8.2.5. The Variables of Construct (5) Barriers

The original pool of variables was created through literature review. Finally, this fifth part was constructed mainly from study of (Ustad, 2010) that measures barriers behind the implementation of ESPs in concerned hotels. Total 14 variables represented the barrier construct. Again, Likert scale with five point was used to record the answers where 1denotes strongly disagree and 5 denotes strongly agree.

The variables are listed as below:

- Weak legislation.
- Ineffective and/or non-enforcement of laws; corruption; inadequate monitoring mechanism.
- Initial Implementation cost.
- Uncertain and/or insignificant economic advantage; slow return on investment; paying back of older investments is prior.

- Low top management commitment.
- Existing non-supportive structure.
- Guests are uncooperative.
- Lack of professional help.
- Lack of awareness of concept.
- Complicated certification process.
- Limited green technology.
- Little guest concern.
- Change of routines and management style.
- Certification is costly.

In conclusion, above variables measured five constructs of this study those are listed as below:

(1) Basic information about the respondent and hotel.
(2) The environmental attitude of hotel managers.
(3) ESPs implemented in the concerned hotel.
(4) Managerial observed barriers behind implementing ESPs.
(5) Managerial observed motivational factors behind implementing ESPs

3.9. Content Validity

Content analysis was done with the guidance of three expert academicians and two hoteliers. Hotel professionals and doctorate academicians were invited to give their comments on draft of the research questionnaire.

Table 15: List of Experts Consulted for Content Validity

S.No.	Name	Designation	Company
1.	Dr. Shelly Rekhi Sharma	Director	Shree Hanumant Institutions,Goraya
2.	Dr. Mahesh Kumar	Assistant Professor	Kurukshetra University, Kurukshetra
3.	Dr. Dinesh Dhankar	Assistant Professor	Kurukshetra University, Kurukshetra

4.	Mr. Man Singh	General Manager	Hotel KC Cross Road,Punchkula
5.	Mr. Jagpal Sharma	Duty Manager	Hotel Holiday Inn,Punchkula

The questionnaire was pretested in two stages to check the content validity. In the first stage questionnaire was evaluated by three Doctorate academicians in the month of June 2018.

In second stage, questionnaire was evaluated by two managers from hotel industry in July 2018.The researcher took prior appointments from managers according to their convenient time so that through feedback can be gathered. The respondents were encouraged to put the remarks against the variables that were not clear to them.

Most of the experts mentioned that research questionnaire is easy to understand, but some recommended few modifications in some questions. Overall, some problems had been identified in common in both the stages.

Therefore, some changes were made in the wordings of some questions. For instance, the statement "Fans installed in room and windows open for fresh air" was changed to "Fans installed in room and option to open windows for fresh air". Another statement "Clients will be ready to pay more (because of the hotel environmental sustainable practices)" was changed to "Customers will be ready to pay more (because of the hotel environmental sustainable practices)". The five statements (8, 9, 11, 12 and 18 of draft research questionnaire) of managerial environmental attitude were deleted as per experts' suggestions and thus above-mentioned 15 variables were finalized to measure managerial environmental attitude.

Several suggestions, criteria and expert advices were followed in constructing the final statements for data collection. Some of criteria are as follows:

(a) The statements should use simple language to make questions easy to understand.

(b) The statements should express both positive and negative views of respondent about dimensions.

(c) The statement should be capable to present the clear information about the dimensions of study.

(d) Statement should provide only one interpretation.

Based on the content analysis, 95 variables were finalized for the instrument while deleting five variables out of total 100 variables. There were 14 variables for measuring the basic information about the respondent and hotel, 15 variables measured the environmental attitude of managers, 39 variables measured the ESPs of hotels under 4 different dimensions as mentioned above (in 3.10.2.3.), 14 variables measured the observed barriers and 13 variables measured the motivational factors behind the employment of ESPs in hotel businesses of Punjab.

The process of content validity remained effective as it helped to find out the errors and ambiguity in research questionnaire. Based on the result of this evaluation, the main aim of research questionnaire was found satisfied regarding collection of the required facts for the objectives of this research study.

3.10. Research Questionnaire Pre-Test

The aim of pre-testing the research questionnaire was twofold: (1) to find out the reliability of variables (2) to find out whether all questions were easy to understood and if the wording require any improvement. Literature review helped to generate the list of variables for the measurement of construct of this study. All the variables whether taken from different studies and were framed in a scale format to make the questionnaire uniform, easier and quicker for respondents and to avoid response bias.

Reliability of Measures

A pretest was conducted to collect the responses from some hotels to measure the reliability and clarity of questions. The test was conducted on these responses to ensure that variables have reliability and it was found satisfactory for all constructs:

Environmental attitude: 0.739

Environmental sustainable practices: 0.955

Motivational factors: 0.965

Barriers: 0.864

The research questionnaire was found easy to understand. A final 95-item research questionnaire was finalized to collect the responses on managerial environmental attitude and ESPs of respondent hotels, motivational factors and barriers. The final questionnaire with constructs and variables is reflected in Annexure-1 in the last of this study.

Responses were taken from managers and executives only because they hold an influential part in policy design and implementation of decisions. However, the responses from larger sample would provide a different result for the same study. The intent of this research study is to contribute to the immediate development of ESPs in the hotel businesses of Punjab.

The region Punjab is selected purposively for many reasons; first, this state is famous tourist destination attracting large number of tourists every year and that mass human activity is leaving significant carbon footprint in the area. Second, Punjab is far behind in having green hotels in the area and third, because of researcher access to the managers and hotels in the area.

3.11. Data Collection Implementation

The final research questionnaire was applied to measure the environmental attitude of managers, ESPs implemented in the hotels and managerial observed barriers and motivational factors that affect the implementation of ESPs in hotels. A pretest was conducted to check the appropriateness of research questionnaire. The Census technique was adopted to collect the responses so that more generalization that is appropriate can be developed. All the classified hotels (49) that were registered with HRANI were selected to meet the objective of this research. In addition to this 39 other hotels of repute having more than 10 rooms were selected to increase the response rate. Hotels were contacted both by email and personal contact because of

time and expenses limitations to collect the desired information. However, the mail survey may result in survey error as mentioned in previous study. According to (Bryman, 2016) in the case when research questionnaire is self-administrative and required the self-efforts of respondents in reading, understanding and answering the questions, respondents may feel comfortable in answering with such type of research questionnaire but on the other side, main disadvantage remains as non-response, incomplete information, risk of lighthearted response and more care is required in instrument designing. Non response error is also related to unfairness incorporated in the survey data by having the lower numbers of respondents in comparison to actual sample size. Therefore, the observed survey score for variables measured might be diverse from actual true sample score (Assael & Keon, 1982) as cited by (Wu, 2003).

Some procedures are proved to reduce these survey errors like development of reliable and valid questionnaire, identification of knowledgeable key informants and choice of accurate sample or population. A set of twelve strategies and recommendations was given by (Delener, 1995), to reduce the non-response error. Some of these recommendations have been adopted for this research study to reduce the non- response inaccuracy and survey questionnaire error and explained as follows:

(a) Questionnaire Design and Data Collection

The research questionnaire was developed in easy and clear to understood language. The questions were easy to respond to maintain the concentration of respondents. The responses were measured on Likert scale to collect the more data. The response time to answer the all questions was maximum 30 minutes only.

(b) Personalization and Secrecy

Respondents were informed in advance about the objective of this study through telephone or personal contact before presenting the research questionnaire. In addition to this an assurance was given to respondents that results would be presented in collective form and their personal identification and name of the organization would not be displayed in the research.

(c) Follow up and Second Mail

There was a planned follow-up to increase the response percentage. Some managers did not respond in first contact or said that they would reply after some time. After waiting for two weeks, a reminder email was shoot to such respondents with a request to respond with attached research questionnaire.

(d) Data Collection Time

Data was collected within the period of six months (August 2018-May 2019). Data was collected in short time to reduce the online response bias.

3.12. The choice of Statistical Approach

The choice of statistical approach was depended upon the two objective of data analysis: (1) to examine the difference of ESPs and managerial environmental attitude based on the characteristics of hotels like number of rooms, category of hotel, type of ownership of hotel and tariff of hotels (2) to examine the statistical significance of relationship among predictor (managerial environmental attitude) with the dependent variable (ESPs).

Based on the nature of construct, the recommended statistical test has included the ANOVA and Tukey's HSD, Cluster Analysis, Factor analysis, Multiple Regression analysis and Kendell's W test.

Assumption of Multiple regressions:

(1) There must be direct association among the dependent variables (DV) and independent variables (IV). No irrelevant independent variable is included. Scatterplots can show whether there is a linear or curvilinear relationship.

(2) Multivariate Normality-multiple regression depends upon the assumption that residuals are normally distributed.

(3) No Multicollinearity-multiple regression assumes that the independent variables are not greatly associated with each other.

(4) Homogeneity of variance-this assumption states that all random variables have same finite variance.

(5) Independent and dependent variables are measured correctly and there is no measurement error.

ANOVA-it is used to find out any statistically important variance between the means of two or more groups.

Assumptions of ANOVA

(1) Independence-it is assumed that groups are independent of each other.

(2) Normality-it is expected that the dispersals of residuals are normal.

(3) Homogeneity or Equality of variances.

3.13. Sample Characteristics

Mail survey is convenient data collection tool while collecting data from large geographical area. Since this research study is statewide, covering more than one city the mail survey was incorporated in addition to personal interaction with managers.

In addition to 49 hotels of HRANI list, 39 hotels of repute (having more than 10 rooms) were taken on judgmental sampling technique to increase the rate of responses. The addition hotels have been chosen to increase the number of response and make the data suitable to test as decided for this study. Total 88 hotels were contacted with research questionnaire.

3.13.1. Basic Information of Hotels

(a) Response Rate of Hotels

First stage of data collection was started in the month of August 2018 through email. Total 33-research questionnaire were sent through email to 33 managers from 22

hotels. The nineteen (19) managers responded back in response of 1st email. After two weeks, reminder emails were sent to those (14 managers), who did not respond back in response to first email and this time only 6 managers replied back taking online responses altogether to 25 from 19 hotels. The managers from remaining three hotels did not respond to reminder mail also. Personal visits were paid to 66 hotels with hard copy of research questionnaire during December 2018-May 2019. Total 53 hotels act positively and filled the research questionnaire while two hotels were found closed for renovation (Avaas Life Style, Amritsar and Drive in 22 Mohali). Overall, 221 managers completed the research questionnaire both by email and personal contacts from 72 properties out of 88 hotels (at the rate of 81.81%).

Table 16: Response Rate Analysis of Hotels

Total Hotels Contacted	88	100%
Hotels refused to respond	12	13.63%
Hotels closed for renovation	02	2.27%
Hotels Closed Permanently	02	2.27%
Hotels Responded back	72	81.81%
Received responses	221	N.A.
Incomplete Questionnaire	19	8.5%
Usable responses	202	91.4%

(b) Geographical Information of Respondent Hotels

Response rate were as follows: Jalandhar 21.28%, Amritsar 24.75%, Ludhiana 29.20%, Zirakpur 12.87%, Mohali 4.95%, Nawanshahr 6.93%. Majority of the hotels were situated in the most visited cities of Punjab i.e. Amritsar, Jalandhar and Ludhiana. Approximately 83% hotels were located in these three cities. Amritsar was having 27 hotels (30.68 %), Jalandhar 24 hotels (27.27 %), and Ludhiana 22 hotels (25%). Mohali, Zirakpur and Nawanshahr represented with 4 hotels (4.54%), 7 hotels (7.95%) and 4 hotels (4.94%) respectively. Thus total hotels selected and contacted were 88 from all over the Punjab while 72 hotels responded back with 221 responses altogether in which 202 responses were found complete and usable.

Table 17: Geographical Information of Respondent Hotels

	Total Hotels Contacted	Total Hotels Responded Back	Usable Responses Received	Response Rate
Jalandhar	24	19	43	21.28%
Amritsar	27	21	50	24.75%
Ludhiana	22	20	59	29.20%
Zirakpur	07	06	26	12.87%
Mohali	04	02	10	4.95%
Nawanshahr	04	04	14	6.93%

Total Hotels Contacted: 88 Total Hotels Responded Back: 72 Total Responses: 202

(c) Age of Respondent Hotels

Approximately 87 percent of responding hotels were in operation between 2 to 15 years. The other 13% hotels were in operation between 15 years to 42 years. Sample frame was not put in consideration of age of the hotel.

Table 18: Age of Respondent Hotels

	Frequency	Percentage
2 year or less	23	11.38
3 to 5 years	46	22.77
6 to 10 years	78	38.61
11 to 15 years	28	13.86
16 to 20 years	13	6.43
21 to 25 years	2	0.99
26 year or more	12	5.94
Total	202	100

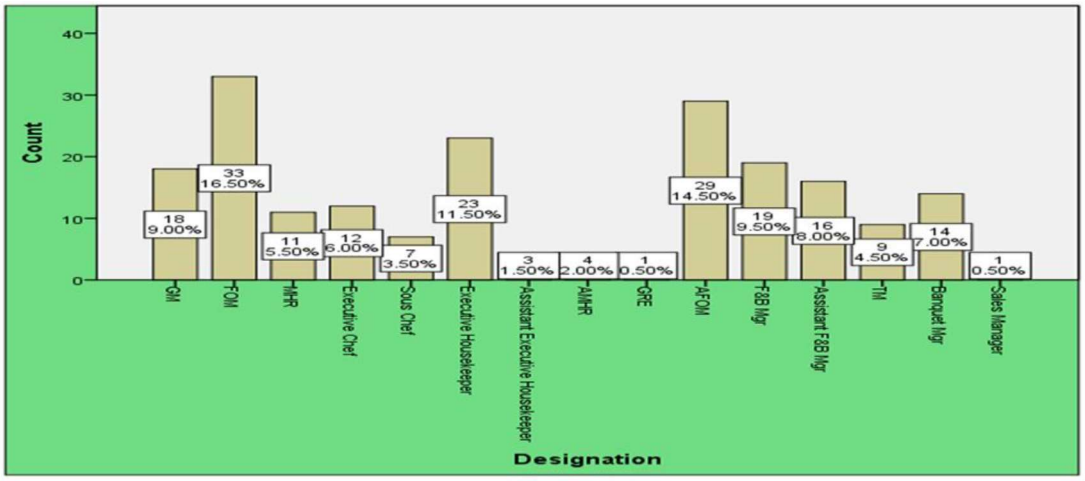
3.13.2. Personal Information of Respondent

According to (Phillips, 1981; Sharfman, 1998) as cited by (Wu, 2003) single key informant can create response bias by self-reported reviewing. These researchers (Phillips, 1981; Sharfman, 1998) further suggested to include multiple respondent from the same organization to avoid this type of response bias. Huber & Power (1985) suggested some care in choosing the key respondent that may reduce the response biasness as mentioned above. This study has tried to include the multiple respondents from the selected hotels to minimize the response bias.

(a) The job titles of respondents

This study was focused towards the top managers of hotel industry of Punjab. The respondents were dominated by front office managers (16.50 %), followed by assistant front office managers (14.50 %), executive housekeeper (11.50 %), and F&B Managers (9%). The other designations represented less than 9% response rate. All these job categories were found expert enough to provide the data to fulfill the objective of this study. The range of different job titles may be associated with two reasons. First, the 'Manager Human Resource' may serve as 'Training Manager' in some hotels. Second, in small hotels the role of Assistant Executive Housekeeper may carry some additional floor supervisory duties also.

Figure 3: Job titles of respondents



(b) Gender of respondents

Most of the participated managers were male 171 (84.65 %) female represented rest responses 31 (15.35%). This study was targeted to managerial level only and participants were asked to mention their position in the concerned hotels

Figure 4: Gender of respondents

3.14. Data Analysis

The survey for data collection was started on 12th August 2018 and ended on 20th May 2019.On completion of data collection the further process such as data sorting, data editing, data coding and final analysis were performed. The process of hypotheses testing was initiated by entering the processed data into Statistical Package for the Social Sciences (SPSS) version 22. The data was manually checked to identify any missing and incorrect data before entering data in the software. The work of analysis has undertaken in many steps. In the first step descriptive analysis was applied to the construct of basic information to explore the characteristics of respondents and hotels. The results of descriptive statistics were presented through different tables and figures. This study used multiple statistical methods to conclude the results such as ANOVA, Multiple Regression, Cluster Analysis, Factor Analysis, Kendell's W etc.

3.15. Summary

This chapter has identified the objectives of this research study in addition to research hypotheses, research design and methodology, survey approach, sample frame, research questionnaire design, statistical approach etc. The chapter gives the detail of research processes that were adopted to collect the valid and reliable data to get the

answers of research questions. The self-constructed quantitative research questionnaire with Likert scale of 5 points was applied to collect the responses. The careful planning in designing the research questionnaire and pre-testing were targeted to assure the collection of correct data. The collected data was coded and then analyzed by using SPSS 22.

Chapter 4 Results

4.1. Introduction

The earlier chapter three presented the details of hypotheses in context to this study. This research was focused on investigating the relationship among managerial

answers of research questions. The self-constructed quantitative research questionnaire with Likert scale of 5 points was applied to collect the responses. The careful planning in designing the research questionnaire and pre-testing were targeted to assure the collection of correct data. The collected data was coded and then analyzed by using SPSS 22.

Chapter 4 Results

4.1. Introduction

The earlier chapter three presented the details of hypotheses in context to this study. This research was focused on investigating the relationship among managerial

environmental attitude and implementation of ESPs in the selected hotels of Punjab. Research scale also measured the motivational factors and barriers, observed by managers in the process of implementing ESPs in the organization. This chapter provides the result of processed data in the context to research questions and research hypotheses as projected in the preceding chapter. The total numbers of online responses (usable) received were twenty-five (25). In addition to it, one hundred and seventy-seven (177) usable responses were received by personal visits to hotels. The results of this research study are presented by question by question.

This chapter has reported the results focusing on following heads:

1. Responses by characteristics of the participated hotels.
2. ESPs comparison by characteristics of hotels as mentioned in chapter three;
   Dimension 1: Comparison of energy related ESPs.
   Dimension 2: Comparison of overall ESPs.
   Dimension 3: Comparison of waste related ESPs.
   Dimension 4: Comparison of water related ESPs.
3. Managerial environmental attitudes based on the characteristics of hotels as stated in chapter three.
4. The relationship of managerial environmental attitude and ESPs implemented in the selected hotels.
5. Managerial observed barriers and motivational factors.

4.2 Responses by Characteristics of Participated Hotels

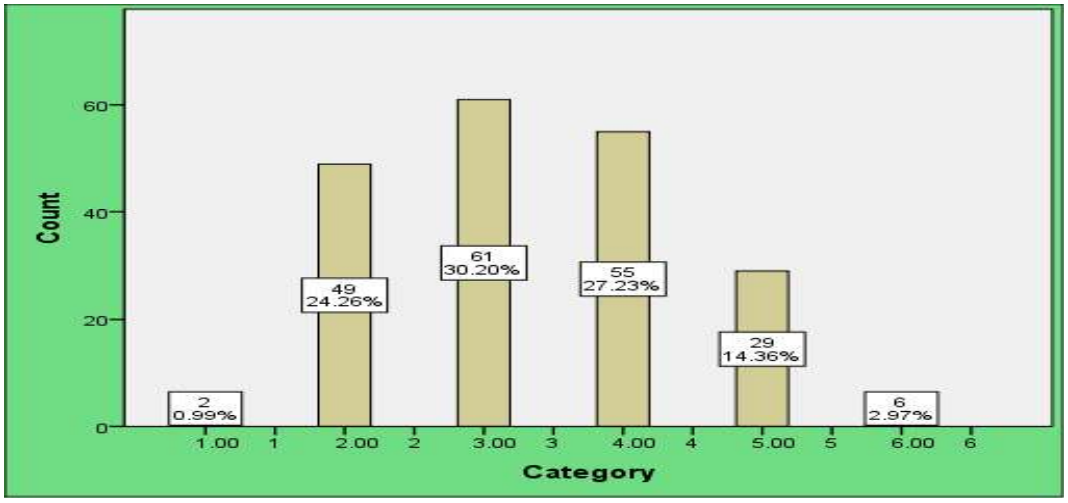
Descriptive statistics provides a better understanding of data. Descriptive information e.g. frequencies, mean, median, mode, standard deviation and graphic representation of data was used to explore the responses by characteristics of participated hotels e.g. number of rooms, categories of hotel, type of ownership and tariff plans. Descriptive analysis of responses is presented in the following sections:

4.2.1 Responses by category of hotels

Majority of the responses sixty one (61) came from three star category hotels at the rate of 30.20% followed by 4 star category hotels that contributed fifty five responses

(55) at the rate of 27.23%, the count of responses from 2 star hotels was forty nine (49) accounted for 24.26%, the count of response from luxury hotels providing five star facilities was twenty nine (29) at the rate of 14.36% while luxury hotels providing five star deluxe facilities contributed relatively less responses that were six (6) overall at the rate of 2.97%,the responses from one star category hotel were only two (2) at the rate of (0.99%).

Figure 5: Responses by category of hotels



4.2.2. Responses by type of ownership of hotels

Out of 202 responses, 86 responses came from the locally owned and operated hotels (representing 42.6 %) and 67 came from international chain or group (representing 33.2 %) while 49 were from local chain or group hotels (representing 24.3%).
Table on next page.

Table 19: Responses by type of ownership of hotels

		Responses	Percentage	Valid Percentage	Cumulative Percentage
Valid	Part of international chain or group	67	33.2	33.2	33.2
	Part of locally operated chain or group	49	24.3	24.3	57.4
	Locally owned and operated	86	42.6	42.6	100.0
	Total	202	100.0	100.0	

4.2.3. Responses by number of rooms/size of hotels

73 responses came from hotels having 10 to 25 room (36.1%), followed by 58 responses from hotels with 26 to 50 rooms (28.7%), 39 responses came from hotels having 51 to 75 rooms (19.3%), 21 responses were from hotels having above 100 rooms (10.4%) and eleven responses were from the hotels having rooms between 76 to 100 (5. 4%).Majority of hotels in Punjab were under small category as altogether 65% respondent hotels had less than 50 rooms.

Table 20: Responses by number of rooms/size of the hotels

		Responses	Percentage	Valid Percentage	Cumulative Percentage
Valid	10-25	73	36.1	36.1	36.1
	26-50	58	28.7	28.7	64.9
	51-75	39	19.3	19.3	84.2
	76-100	11	5.4	5.4	89.6
	Above 100	21	10.4	10.4	100.0
	Total	202	100.0	100.0	

4.2.4. Responses by tariff of hotels

Out of 202 responses, 87 responses came from hotels having tariff category of 1000-3000 (representing 43.1 %) and 80 responses were from the hotels with tariff category of 3001-5000 (representing 39.6%), while 29 responses came from hotels having tariff category of 5001-7000 (representing 14.4%), there were only 6 responses that came from the tariff category of above 7000 (representing 3%).

		Responses	Percentage	Valid Percentage	Cumulative Percentage
Valid	1000-3000	87	43.1	43.1	43.1
	3001-5000	80	39.6	39.6	82.7
	5001-7000	29	14.4	14.4	97.0
	Above 7000	6	3.0	3.0	100.0
	Total	202	100.0	100.0	

Table 21: Responses by tariff of hotels

4.3 Results of Analyses Related to Research Question 1

What are the existing environmental sustainable practices implemented in the hotel industry of Punjab?

Analysis of responses related to implementation of ESPs by the respondent hotels provided the answer to first objective. Thirty-nine items were finalized to measure the hotels' involvement in ESPs. The responses were collected by the help of Likert scale. The tables below describe the hotels' involvement in ESPs based on the characteristics of hotels.

Dimension 1: Energy related environmental sustainable practices

At mentioned in chapter three, the first dimension of ESPs was related to Energy that contains 11 variables. These variables were measured against the different characteristics of hotels. Results are presented in the following sections;

Table on next page.

Table 22: Comparison of Energy Related ESPs by Number of Rooms in Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

	10-25 (C1)	26-50 (C2)	51-75 (C3)	76-100 (C4)	Above 100 (C5)	F	P	Pairwise tests of significance**
ES1	2.27(.97)	2.79(1.05)	3.74(.90)	3.72(1.00)	4.28(.56)	28.20	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C3>C2;C4>C2;C5>C2
ES2	3.46(1.14)	3.58(1.12)	4.25(.84)	4.36(.67)	4.33(.73)	6.69	.000*	C3>C1; C5>C1 C3>C2;C5>C2
ES14	1.87(.94)	2.67(1.49)	3.23(1.36)	3.90(.94)	4.00(.77)	19.54	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C4>C2;C5>C2
ES15	**4.36**(.51)	**4.48**(.59)	**4.64**(.48)	**4.54**(.52)	**4.66**(.48)	2.31	.058	
ES16	2.83(1.10)	3.55(1.17)	4.00(.85)	4.27(.90)	4.66(.57)	18.13	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C5>C2
ES20	1.45(.78)	2.24(1.54)	4.23(.93)	4.27(.90)	4.19(.60)	62.50	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C3>C2;C4>C2;C5>C2
ES21	3.47(.83)	3.67(1.01)	4.33(.73)	4.09(1.04)	4.42(.59)	9.52	.000*	C3>C1; C5>C1 C3>C2;C5>C2
ES22	3.89(.77)	3.91(1.04)	4.46(.60)	4.45(.68)	4.52(.51)	5.88	.000*	C3>C1; C5>C1 C3>C2;C5>C2
ES23	4.28(.73)	3.82(1.28)	4.20(.80)	4.36(.80)	4.47(.60)	2.94	.022*	C1>C2
ES30	4.24(.70)	3.72(1.26)	4.00(1.16)	3.45(1.36)	3.09(1.51)	5.39	.000*	C1>C5 C3>C5
ES39	1.43(.81)	2.24(1.36)	3.46(1.14)	3.54(1.43)	4.09(.70)	39.25	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C3>C2;C4>C2;C5>C2

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of ten out of the eleven variables of energy related ESPs based on the number of rooms of hotels:

ES1 (Implementing renewal energy program (e.g. wind or solar Power) -All the hotels having more than 25 rooms are found more involved in practicing energy related ESPs in comparison to C1 hotels. All the hotels having more than 50 rooms are found more involved in practicing energy related ESPs in comparison to C2 hotels.

ES2 (Energy saving stickers are put at appropriate places in hotel) –-C3 and C4 hotels having rooms between 51-100 reported more involvement in practicing this variable in comparison to C 1 and C2 hotels.

ES14 (Double glazed vacuum sealed windows) – All the hotels having more than 25 rooms are found more involved in practicing energy related ESPs in comparison to C1 hotels.C4 and C5 hotels were found above the C2 in practicing this variable.

ES16 (Installs occupancy sensors or a key card control system in guest rooms to reduce in room energy consumption) - All the hotels having more than 25 rooms are found more involved in practicing energy related ESPs in comparison to C1 hotels.C5 hotels were found above the C2 in practicing this variable.

ES20 (Energy efficient laundry) –All the hotels having more than 25 rooms are found more involved in practicing energy related ESPs in comparison to C1 hotels. All the hotels having more than 50 rooms are found more involved in practicing energy related ESPs in comparison to C2 hotels.

ES21 (Programmable thermostat) –C3 and C4 hotels having rooms between 51-100 reported more involvement in practicing this variable in comparison to C 1 and C2 hotels.

ES22 (Led exist signs) – C3 and C4 hotels having rooms between 51-100 reported more involvement in practicing this variable in comparison to C 1 and C2 hotels.

ES23 (Conducting an energy audit) - C1 hotels are found more involved than C2 hotels.

ES30 (Fans installed in room and option to open windows for fresh air) - C1 hotels and C3 hotels reported more involvement than C5 hotel.

ES39 (Laundry washing machines are run on full load) –-All the hotels having more than 25 rooms are found more involved in practicing energy related ESPs in comparison to C1 hotels. All the hotels having more than 50 rooms are found more involved in practicing energy related ESPs in comparison to C2 hotels.

However, ES 15 (Using energy efficient lighting) does not have any impact of number of rooms of the hotels on actual implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 22 above. C1 hotels have maximum lowest mean scores. The most implemented ESP was the use of energy efficient lighting (mean value above 4.3). Majority of the respondent hotels mentioned the use of energy efficient lighting in their organizations.

Table 23: Comparison of Energy Related ESPs by Category of Hotels (Complete Dataset N=202)

	One star (C1)	Two Star (C2)	Three Star (C3)	Four Star (C4)	Luxury hotels providing Five Star facilities (C5)	Luxury hotels providing Five Star deluxe facilities (C6)	**F**	**P**	Pairwise tests of significance**
ES1	1.50(.70)	2.34(.87)	2.47(1.08)	3.43(.99)	4.20(.72)	4.20(.75)	**22.45**	**.000***	C5>C1; C6>C1 C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4
ES2	3.00(1.41)	3.59(.99)	3.49(1.16)	3.89(1.13)	4.44(.57)	4.66(.51)	**4.89**	**.000***	C5>C2 C5>C3
ES14	1.50(.70)	1.71(.84)	2.24(1.27)	3.29(1.34)	4.03(.86)	3.83(.75)	**21.94**	**.000***	C4>C2; C5>C2; C6>C2 C4>C3;C5>C3;C6>C3
ES15	**4.50**(.70)	**4.42**(.54)	**4.40**(.52)	**4.60**(.56)	4.51(.50)	**4.83**(.40)	**1.36**	**.240**	
ES16	2.00(.00)	2.69(1.04)	3.18(1.17)	4.12(.86)	**4.58**(.50)	4.00(.89)	**20.94**	**.000***	C4>C1; C5>C1 C4>C2; C5>C2; C6>C2 C4>C3;C5>C3
ES20	1.50(.70)	1.32(.47)	1.72(1.22)	3.90(1.28)	4.27(.64)	4.00(.63)	**60.73**	**.000***	C4>C1; C5>C1; C6>C1 C4>C2; C5>C2; C6>C2 C4>C3;C5>C3;C6>C3
ES21	2.50(.70)	3.44(.86)	3.44(.88)	4.20(.84)	4.55(.50)	4.50(.54)	**13.49**	**.000***	C4>C1; C5>C1; C6>C1 C4>C2; C5>C2; C6>C2 C4>C3;C5>C3;C6>C3
ES22	4.00(.00)	3.89(.82)	3.98(.76)	4.14(1.02)	4.48(.57)	**4.83**(.40)	**3.04**	**.011***	C5>C2
ES23	**4.50**(.70)	4.32(.77)	4.09(.96)	3.90(1.19)	4.51(.50)	4.00(.89)	**2.07**	**.070**	
ES30	**4.50**(.70)	4.34(.56)	4.06(.96)	3.90(1.14)	2.55(1.45)	4.33(.81)	**12.65**	**.000***	C2>C5;C3>C5;C4>C5;C6>C5
ES39	1.50(.70)	1.18(.39)	1.78(1.08)	3.34(1.20)	4.24(.73)	3.00(.89)	**54.88**	**.000***	C5>C1 C3>C2; C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4;C5>C6

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD, it was explored that there was significant variance in practicing of nine out of the eleven variables of energy related ESPs based on the category of hotels.

The results are as follows:

ES1 (Implementing renewal energy program (e.g. wind or solar Power) --C5 hotels and C6 hotels were above the C1 hotels.C4 hotels; C5 hotels and C6 hotels reported higher involvement than C2 hotels and C3 hotels .C5 hotels were more involved than C4 hotels.

ES2 (Energy saving stickers are put at appropriate places in hotel) – C5 hotels reported more involvement than C2 hotels and C3 hotels.

ES14 (Double-glazed vacuum-sealed windows) – C4 hotels; C5 hotels and C6 hotels reported higher involvement than C2 hotels and C3 hotels.

ES16 (Installs occupancy sensors or a key card control system in guest rooms to reduce in room energy consumption) - C4 hotels and C5 hotels were above the C1 hotels.C4 hotels; C5 hotels and C6 hotels reported higher involvement than C2 hotels. C4 hotels and C5 hotels reported higher involvement than C3 hotels.

ES20 (Energy efficient laundry) - C4 hotels; C5 hotels and C6 hotels reported higher involvement than C2 hotels and C3 hotels.

ES21 (Programmable thermostat) – C4 hotels; C5 hotels and C6 hotels reported higher involvement than C2 hotels and C3 hotels.

ES22 (Led exist signs) -- C5 hotels reported more involvement than C2 hotels.

ES30 (Fans installed in room and option to open windows for fresh air) – C2 hotels; C3 hotels; C4 hotels and C6 hotels reported higher involvement than C5 hotels.

ES39 (Laundry washing machines are run on full load) –-C5 hotels reported more involvement than C1 hotels.C3 hotels; C4 hotels; C5 hotels and C6 hotels reported higher involvement than C2 hotels.C4 hotels; C5 hotels and C6 hotels reported higher involvement than C3 hotels.

However, ES 15 (Using energy efficient lighting) and ES23 (Conducting an energy audit) does not have any impact of category of the hotels on actual implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 23 above. C1 hotels have maximum lowest mean scores. The most implemented ESP in C1 of hotels was use of energy efficient lighting, conducting an energy audit, fans installed in room and option to open windows for fresh air (mean value 4.5, common for all variables).C2; C3; C4 and C5 category of hotels reported use of energy efficient lighting as most implemented ESPs (mean value above 4.4). C6 mentioned use of energy efficient lighting and led exist signs as most practiced ESP (mean value 4.8, common for both variables).

Table 24: Comparison of Energy Related ESPs by Type of Ownership of Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

	Part of international chain or group (C 1)	Part of locally operated chain or group (C2)	Locally owned and operated (C3)	F	P	Pairwise tests of significance**
ES1	3.67(1.02)	2.85(1.15)	2.54(1.09)	20.8	.000*	C1>C2; C1>C3
ES2	4.13(.96)	3.65(1.16)	3.60(1.07)	5.21	.006*	C1>C2;C1>C3
ES14	3.40(1.32)	2.79(1.52)	2.09(1.09)	19.7	.000*	C1>C2; C1>C3 C2>C3
ES15	**4.56**(.49)	**4.46**(.61)	**4.45**(.52)	0.9	0.41	
ES16	3.92(1.17)	3.63(1.23)	3.17(1.08)	8.22	.000*	C1>C3
ES20	3.80(1.36)	2.57(1.59)	1.80(1.20)	41	.000*	C1>C2; C1>C3 C2>C3
ES21	4.26(.70)	3.91(.88)	3.44(.96)	17.4	.000*	C1>C3 C2>C3
ES22	4.50(.58)	4.04(.99)	3.82(.81)	13.9	.000*	C1>C2;C1>C3
ES23	4.34(.74)	4.02(1.08)	4.10(.99)	1.93	0.15	

ES30	3.53(1.40)	3.97(1.07)	4.10(.92)	4.89	.008*	C3>C1
ES39	3.58(1.15)	2.16(1.32)	1.73(1.16)	46.4	.000*	C1>C2;C1>C3

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD, it was explored that there was significant variance in practicing of nine out of the eleven variables of energy related ESPs based on the type of ownership of hotels. The results are as follows:

ES1 (Implementing renewal energy program (e.g. wind or solar Power) - C1 hotels reported more involvement than C2 hotels and C3 hotels.

ES2 (Energy saving stickers are put at appropriate places in hotel) - C1 hotels reported more involvement than C2 hotels and C3 hotels.

ES14 (Double-glazed vacuum-sealed windows) - C1 hotels reported more involvement than C2 hotels and C3 hotels.C2 hotels were above C3 hotels.

ES16 (Installs occupancy sensors or a key card control system in guest rooms to reduce in room energy consumption) - C1 hotels reported more involvement than C3 hotels

ES20 (Energy efficient laundry) - C1 hotels reported more involvement than C2 hotels and C3 hotels.C2 hotels were also above C3 hotels.

ES21 (Programmable thermostat) - C1 hotels and C2 hotels reported more involvement than C3 hotels.

ES22 (Led exist signs) - C1 hotels reported more involvement than C2 hotels and C3 hotels.

ES30 (Fans installed in room and option to open windows for fresh air) - C3 hotels reported more involvement than C1 hotels.

ES39 (Laundry washing machines are run on full load) - C1 hotels reported more involvement than C2 hotels and C3 hotels.

However, ES 15 (Using energy efficient lighting) and ES23 (Conducting an energy audit) does not have any impact of type of ownership of the hotels on actual implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 24 above. Category 3 hotels have maximum lowest mean scores. The most implemented ESP was the use of energy efficient lighting (mean value above 4.4). Most of the hotels mentioned that they were using energy efficient lighting in their organizations.

Table 25: Comparison of Energy Related ESPs by Tariff of Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

	1000-3000 (C1)	3001-5000 (C2)	5001-7000 (C3)	Above 7000 (C4)	F	P	Pairwise tests of significance**
ES1	2.28(.90)	3.41(1.12)	3.82(1.07)	3.66(.51)	26.2	.000*	C2>C1;C3>C1;C4>C1
ES2	3.42(1.10)	3.92(1.04)	4.34(.81)	4.66(.51)	8.32	.000*	C2>C1;C3>C1;C4>C1
ES14	1.77(.83)	3.18(1.35)	3.89(1.23)	3.83(.98)	37.7	.000*	C2>C1; C3>C1; C4>C1 C3>C2
ES15	4.40(.51)	4.56(.57)	4.58(.50)	4.50(.54)	1.56	0.2	
ES16	2.87(1.05)	3.91(1.11)	4.27(.84)	4.50(.54)	21.8	.000*	C2>C1;C3>C1;C4>C1
ES20	1.27(.44)	3.51(1.48)	4.10(.97)	4.16(.75)	89.3	.000*	C2>C1;C3>C1;C4>C1
ES21	3.44(.81)	4.02(.92)	4.31(.92)	4.50(.54)	11	.000*	C2>C1;C3>C1;C4>C1
ES22	3.88(.75)	4.17(.93)	4.44(.73)	4.66(.51)	4.84	.003*	C3>C1
ES23	4.29(.76)	3.96(1.31)	4.20(.90)	4.66(.51)	2.41	0.07	
ES30	4.34(.56)	3.47(1.38)	3.75(1.29)	3.33(1.36)	9.53	.000*	C1>C2
ES39	1.29(.55)	3.06(1.33)	3.93(1.06)	3.83(.75)	72.1	.000*	C2>C1; C3>C1; C4>C1 C3>C2

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of nine out of

the eleven variables of energy related ESPs based on the tariff of hotels. The results are as follows:

ES1 (Implementing renewal energy program (e.g. wind or solar Power) – C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.

ES2 (Energy saving stickers are put at appropriate places in hotel) – C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.

ES14 (Double glazed vacuum sealed windows) – C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.C3 hotels are found more involved than C2 hotels.

ES16 (Installs occupancy sensors or a key card control system in guest rooms to reduce in room energy consumption) – C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.

ES20 (Energy efficient laundry) – C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.

ES21 (Programmable thermostat) - C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.

ES22 (Led exist signs) - C3 hotels are found more involved than C1 hotels.

ES30 (Fans installed in room and option to open windows for fresh air) – C1 hotels reported more involvement than C2 hotels.

ES39 (Laundry washing machines are run on full load) - C2 hotels; C3 hotels and C4 hotels reported more involvement than C1 hotels.C3 hotels are found more involved than C2 hotels.

However, ES 15 (Using energy efficient lighting) and ES23 (Conducting an energy audit) do not have any influence of tariff of the hotels on actual implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 25 above. C1 hotels have

maximum lowest mean scores. The most implemented ESP was use of energy efficient lighting in all category of hotels (mean value above 4.4), irrespective of category 4. Energy saving stickers, led exist signs, conducting an energy audit were most practiced ESPs concerning category 4 hotels (mean value 4.66, common for all variables).

	10-25 (C1)	26-50 (C2)	51-75 (C3)	76-100 (C4)	Above 100 (C5)	F	P	Pairwise tests of significance**
ES18	**3.52**(.86)	**3.87**(.95)	**3.92**(1.01)	**4.18**(.60)	**4.66**(.48)	7.50	.000*	C5>C1 C5>C2 C5>C3
ES24	1.50(.70)	1.93(1.25)	1.82(.88)	2.63(.92)	3.14(.96)	13.44	.000*	C4>C1; C5>C1 C5>C2 C5>C3
ES25	1.52(.80)	1.77(1.15)	2.23(1.15)	2.81(1.07)	3.23(.76)	15.33	.000*	C3>C1; C4>C1; C5>C1 C4>C2; C5>C2 C4>C3

Dimension 2: Overall Environmental Sustainable Practices

Table 26: Comparison of Overall ESPs by Number of Rooms in Hotels (Complete Dataset N=202)

ES26	1.34(.62)	1.60(1.07)	1.64(.81)	2.00(1.26)	2.38(1.20)	5.81	.000*	C5>C1 C5>C2 C5>C3
ES27	1.71(.73)	2.00(1.19)	2.20(.86)	3.18(1.07)	2.90(.88)	10.71	.000*	C4>C1; C5>C1 C4>C2; C5>C2 C4>C3
ES28	1.73(.86)	2.44(1.25)	2.79(1.00)	3.18(.87)	3.52(.92)	16.90	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C5>C2
ES29	2.43(1.29)	2.25(1.27)	3.00(1.14)	3.36(1.12)	3.76(.83)	8.21	.000*	C5>C1 C3>C2;C4>C2;C5>C2
ES33	1.72(.75)	2.22(1.37)	2.12(.89)	3.27(.90)	3.38(1.07)	13.73	.000*	C4>C1; C5>C1 C4>C2; C5>C2 C4>C3;C5>C3

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

The next factor of ESPs was Overall Environmental Sustainable Practices. It contains eight variables. These variables were measured against the different characteristics of hotels.

The results of one-way ANOVA and Tukey's HSD revealed that there was significant difference in practicing of all eight variables of overall ESPs based on the number of rooms of the hotels.

The results are as below:

ES18 (Using environmental friendly cleaning agents) –C5 hotels were found more involved than C1 hotels; C2 hotels and C3 hotels.

ES24 (Having a written environmental policy - C5 hotels were found more involved than C1 hotels; C2 hotels and C3 hotels.C4 hotels were also above the C1 hotels.

ES25 (Con- ducting an environmental audit) –C3 hotels; C4 hotels and C5 hotels reported more implementation than C1 hotels. C4 hotels and C5 hotels were also above the C2 Hotels.C4 hotels reported more involvement than C3 hotels.

ES26 (Subscribing to a formal environmental certification program (such as ISO 14001 or EMAS or similar)) - C5 hotels were found more involved than C1 hotels; C2 hotels and C3 hotels.

ES27 (Conducting staff training on environmental issues) -C4 hotels and C5 hotels reported more implementation than C1 hotels. C4 hotels and C5 hotels were also above the C2 Hotels.C4 hotels reported more involvement than C3 hotels.

ES28 (Educate guests on environmental sustainable practices) –C2 hotels; C3 hotels; C4 hotels and C5 hotels were found more involved in implementing this variable than C1 hotels.C5 hotels were also above the C2 hotels.

ES29 (No VOC paint) - C3 hotels; C4 hotels and C5 hotels were above the C2 hotels in the implementation of this practice. C5 hotels were also above the C1 hotels.

ES33 (Individuals are taking responsibility for environmental management) –C4 hotels and C5 hotels reported more involvement than C1 hotels; C2 hotels and C3 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 26 above. C1 hotels have maximum lowest mean scores. The most implemented ESP was the using of environmental friendly cleaning agents in all categories of hotels (mean value above 3.5).

Table 27: Comparison of Overall ESPs by Category of Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of all the eight

	One star (C1)	Two Star (C2)	Three Star (C3)	Four Star (C4)	Luxury Hotels providing five star facilities (C5)	Luxury hotels providing five star deluxe facilities (C6)	F	P	Pairwise tests of significance**
ES18	**3.00**(1.41)	**3.63**(.92)	**3.55**(.88)	**4.10**(.76)	**4.62**(.49)	3.00(1.67)	9.40	.000*	C5>C2 C4>C3; C5>C3 C4>C6 C5>C6
ES24	1.50(.70)	1.40(.49)	1.63(.89)	2.05(1.23)	3.00(1.03)	2.66(.81)	12.46	.000*	C4>C2; C5>C2; C6>C2 C5>C3 C5>C4
ES25	1.50(.70)	1.32(.47)	1.59(.86)	2.07(1.13)	3.37(.82)	3.83(.98)	28.47	.000*	C5>C1; C6>C1 C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4; C6>C4
ES26	1.00(.00)	1.28(.45)	1.39(.75)	1.85(1.17)	2.17(1.13)	2.00(1.09)	5.367	.000*	C4>C2; C5>C2 C5>C3
ES27	1.50(.70)	1.57(.54)	1.88(.98)	2.20(1.09)	3.13(.91)	2.66(.81)	12.154	.000*	C4>C2; C5>C2 C5>C3 C5>C4
ES28	1.50(.70)	1.55(.57)	2.19(1.09)	2.70(1.11)	3.75(.87)	2.66(.81)	21.453	.000*	C5>C1 C3>C2; C4>C2; C5>C2 C5>C3 C5>C4
ES29	1.50(.70)	2.30(1.22)	2.29(1.34)	2.78(1.16)	3.75(.78)	**4.00**(.63)	9.066	.000*	C5>C2; C6>C2 C5>C3; C6>C3 C5>C4
ES33	1.00(.00)	1.61(.60)	2.09(1.19)	2.21(1.14)	3.41(.98)	2.50(.83)	12.187	.000*	C5>C1 C4>C2; C5>C2 C5>C3 C5>C4

variables of overall ESPs based on the category of the hotels.

The results are as below:

ES18 (Using environmental friendly cleaning agents) –C5 hotels were found more involved than C2 hotels; C3 hotels and C6 hotels. C4 hotels were also above the C3 hotels and C6 hotels.

ES24 (Having a written environmental policy - C5 hotels were found more involved than C2 hotels; C3 hotels and C4 hotels.C4 hotels and C6 hotels were above the C2 hotels.

ES25 (Con- ducting an environmental audit) – C5 hotels and C6 hotels were found more involved than C1 hotels; C2 hotels; C3 hotels and C4 hotels. C4 hotels were also above the C2 hotels and C3 hotels.

ES26 (Subscribing to a formal environmental certification program (such as ISO 14001 or EMAS or similar)) – C4 hotels and C5 hotels were found more involved than C2 hotels. C5 hotels were also above the C3 hotels.

ES27 (Conducting staff training on environmental issues) – C5 hotels were found more involved than C2 hotels; C3 hotels and C4 hotels. C4 hotels were also above the C2 hotels.

ES28 (Educate guests on environmental sustainable practices) – C5 hotels were found more involved than C1 hotels; C2 hotels; C3 hotels and C4 hotels. C3 hotels and C4 hotels were also above the C2 hotels

ES29 (No VOC paint) – C5 hotels were found more involved than C2 hotels; C3 hotels and C4 hotels. C6 hotels were above the C2 hotels and C3 hotels.

ES33 (Individuals are taking responsibility for environmental management) –C5 hotels reported more involvement than C1 hotels; C2 hotels; C3 hotels and C4 hotels. Hotels of C4 were also above the C2 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 27 above. C1 hotels have maximum lowest mean scores. The most implemented ESP was the using of environmental friendly cleaning agents in all categories of hotels (mean value above

3.0), irrespective of category 6. No VOC paint was reported as most implemented ESP in category 6 hotels (mean value 4.0).

Table 28: Comparison of Overall ESPs by Type of Ownership (Complete Dataset N=202)

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and

	Part of international chain or group (C1)	Part of locally operated chain or group (C2)	Locally owned and operated (C3)	F	P	Pairwise tests of significance**
ES18	4.02(.96)	3.95(.88)	3.66(.91)	3.34	.037*	C1>C3
ES24	2.31(1.19)	1.91(1.16)	1.61(.79)	8.49	.000*	C1>C3
ES25	2.59(1.15)	1.93(1.19)	1.52(.82)	20.20	.000*	C1>C2; C1>C3
ES26	1.94(1.12)	1.55(1.00)	1.40(.69)	6.34	.002*	C1>C3
ES27	2.65(1.00)	1.97(1.08)	1.72(.82)	18.55	.000*	C1>C2; C1>C3
ES28	2.98(1.12)	2.20(1.22)	2.08(1.03)	13.59	.000*	C1>C2; C1>C3
ES29	3.50(1.02)	2.22(1.24)	2.30(1.21)	25.22	.000*	C1>C2; C1>C3
ES33	2.82(1.15)	2.08(1.32)	1.79(.81)	17.87	.000*	C1>C2; C1>C3

Tukey's HSD explored that there was significant variance in practicing of all the eight variables of overall ESPs based on the ownership of the hotels. The results are as below:

ES18 (Using environmental friendly cleaning agents) –C1 hotels reported more implementation than C3 hotels.

ES24 (Having a written environmental policy – C1 hotels reported more implementation than C3 hotels.

ES25 (Con- ducting an environmental audit) – C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES26 (Subscribing to a formal environmental certification program (such as ISO 14001 or EMAS or similar)) – C1 hotels reported more implementation than C3 hotels.

ES27 (Conducting staff training on environmental issues) – C1 hotels reported more implementation than C2 hotels and C3 hotels.

	1000-3000 (C1)	3001-5000 (C2)	5001-7000 (C3)	Above 7000 (C4)	F	P	Pairwise tests of significance**

ES28 (Educate guests on environmental sustainable practices) – C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES29 (No VOC paint) – C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES33 (Individuals are taking responsibility for environmental management) – C1 hotels reported more implementation than C2 hotels and C3 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 28 above. C3 hotels have maximum lowest mean scores. The most implemented ESP was the using of environmental friendly cleaning agents in all categories of hotels. The mean score of using environmental friendly cleaning agent was above 3.3 in all categories of hotels.

Table 29: Comparison of Overall ESPs by Tariff of Rooms (Complete Dataset N=202)

ES18	**3.56**(.87)	**4.02**(.85)	**4.10**(1.14)	**4.66**(.51)	6.32	.000*	C2>C1;C3>C1;C4>C1
ES24	1.42(.54)	2.10(1.16)	2.79(1.23)	2.50(1.37)	17.15	.000*	C2>C1; C3>C1; C4>C1 C3>C2
ES25	1.37(.51)	2.08(1.10)	3.24(1.21)	3.16(1.47)	33.54	.000*	C2>C1; C3>C1; C4>C1 C3>C2;C4>C2
ES26	1.26(.44)	1.78(1.05)	2.13(1.27)	2.00(1.54)	8.93	.000*	C2>C1;C3>C1
ES27	1.60(.63)	2.20(1.07)	3.10(.93)	2.83(1.47)	22.20	.000*	C2>C1; C3>C1; C4>C1 C3>C2
ES28	1.71(.76)	2.81(1.21)	3.10(1.01)	3.83(.75)	27.18	.000*	C2>C1;C3>C1;C4>C1
ES29	2.21(1.22)	2.78(1.30)	3.62(.82)	3.50(1.04)	11.24	.000*	C2>C1; C3>C1 C3>C2
ES33	1.64(.66)	2.42(1.20)	3.20(1.29)	2.50(1.22)	19.35	.000*	C2>C1; C3>C1 C3>C2

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the entire sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of all the eight variables of overall ESPs based on the tariff of the hotels:

ES18 (Using environmental friendly cleaning agents) –C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.

ES24 (Having a written environmental policy – C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.C3 hotels reported more involvement than C2 hotels.

ES25 (Con- ducting an environmental audit) – C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.C3 hotels and C4 hotels reported more involvement than C2 hotels.

ES26 (Subscribing to a formal environmental certification program (such as ISO 14001 or EMAS or similar)) – C2 hotels and C3 hotels reported more implementation than C1 hotels.

	10-25 (C1)	26-50 (C2)	51-75 (C3)	76-100 (C4)	Above 100 (C5)	F	P	Pairwise tests of significance**

ES27 (Conducting staff training on environmental issues) - C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.C3 hotels reported more involvement than C2 hotels.

ES28 (Educate guests on environmental sustainable practices) - C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.

ES29 (No VOC paint) – C3 hotels reported more implementation than C1 hotels and C2 hotels.C2 hotels were above the C1 hotels.

ES33 (Individuals are taking responsibility for environmental management) - C3 hotels reported more implementation than C1 hotels and C2 hotels.C2 hotels were above the C1 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 29 above. C1 hotels have maximum lowest mean scores. The most implemented ESP was the using of environmental friendly cleaning agents in all categories of hotels. The mean score of using environmental friendly cleaning agent was above 3.5 in all categories of hotels

Dimension 3: Waste Related ESP

The next factor of ESPs was waste management related environmental sustainable practices. It contains 13 variables. These variables were measured against the different characteristics of hotels.

Table 30: Comparison of Waste Related ESPs by Number of Rooms in Hotels (Complete Dataset N=202)
ANOVA and Tukey's HSD

ES03	3.95(.85)	3.48(1.18)	4.15(.93)	4.18(.75)	4.23(.83)	4.27	.002*	C2>C1 C3>C2; C5>C2
ES04	3.76(1.02)	3.86(.98)	4.35(.70)	**4.27**(.64)	4.57(.59)	5.43	.001*	C3>C1; C5>C1 C5>C2
ES05	2.87(1.21)	2.62(1.22)	3.17(1.46)	3.36(1.20)	3.95(.74)	5.14	.001*	C5>C1 C5>C2
ES06	2.24(.93)	2.48(1.34)	3.46(1.02)	3.45(1.21)	3.90(.76)	16.02	.000*	C3>C1; C4>C1; C5>C1 C3>C2; C5>C2
ES12	2.13(.94)	2.31(1.20)	2.43(1.46)	2.72(1.34)	2.52(.92)	1.05	.379	
ES13	**4.08**(.86)	3.77(1.14)	4.00(.79)	**4.27**(.64)	4.47(.60)	2.66	.034*	C5>C2
ES31	3.83(.97)	**4.13**(.82)	**4.58**(.54)	4.27(.78)	4.47(.67)	6.31	.000*	C3>C1; C5>C1
ES32	2.61(1.08)	3.31(1.15)	4.00(.88)	4.09(.70)	4.23(.70)	18.70	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C3>C2; C5>C2
ES34	2.10(.95)	2.48(1.27)	3.64(1.13)	3.27(1.10)	4.04(.97)	21.39	.000*	C3>C1; C4>C1; C5>C1 C3>C2; C5>C2
ES35	2.56(1.02)	3.06(1.21)	4.20(.92)	3.81(1.16)	4.28(.56)	22.78	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C3>C2; C5>C2
ES36	3.54(.95)	3.48(1.27)	4.28(.85)	3.72(.78)	**4.57**(.50)	7.98	.000*	C3>C1; C5>C1 C3>C2; C5>C2
ES37	3.65(.86)	3.41(1.21)	3.53(1.23)	4.00(1.09)	4.33(.57)	3.41	.010*	C5>C2 C5>C3
ES38	2.45(1.01)	2.84(1.12)	3.74(1.06)	3.45(.68)	4.09(.70)	17.41	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C3>C2; C5>C2

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of 12 out of thirteen variables of waste related ESPs based on the number of rooms of the hotels. The results are as follows:

ES3 (Donation/sale of leftover food to local organizations) - C2 hotels are found more involved in implementing this variable in comparison to C1 hotels.C3 hotels and C5 hotels reported more involvement than C2 hotels.

ES4 (Sorting of waste according to type) - C3 hotels and C5 hotels reported more involvement than C1 hotels. C5 hotels reported more involvement than C2 hotels.

ES5 (Donation/auction of hotel furniture) –C5 hotels are above C1 hotels and C2 hotels.

ES6 (Composts organic kitchen waste) – C3 hotels; C4 hotels and C5 hotels reported more involvement than C1 hotels.C3 hotels and C5 hotels reported more involvement than C2 hotels.

ES13 (Sewage treatment plant) - C5 hotels reported more involvement than C2 hotels.

ES31 (Purchasing goods in bulk) - C3 hotels and C5 hotels reported more involvement than C1 hotels.

ES32 (Goods purchased are of recycled material) – C2 hotels; C3 hotels; C4 hotels and C5 hotels reported more involvement than C1 hotels. C3 hotels and C5 hotels reported more involvement than C2 hotels.

ES34 (Refillable amenity dispensers used rather than individual bottles for bathroom amenities) – C3 hotels; C4 hotels and C5 hotels reported more involvement than C1 hotels.C3 hotels and C5 hotels reported more involvement than C2 hotels.

ES35 (Stationary from handmade or recycled paper) – C2 hotels; C3 hotels; C4 hotels and C5 hotels reported more involvement than C1 hotels.C3 hotels and C5 hotels reported more involvement than C2 hotels.

ES36 (Laundry Paper/ Cloth bags rather than plastic bags) - C3 hotels; C4 hotels and C5 hotels reported more involvement than C1 hotels in this variable.C3 hotels and C5 hotels reported more involvement than C2 hotels.

ES37 (Recycled Biodegradable Garbage Bags) - C5 hotels are above C2 hotels and C3 hotels.

ES38 (Pencils and not plastic pens) - C2 hotels; C3 hotels; C4 hotels and C5 hotels reported more involvement than C1 hotels.C3 hotels and C5 hotels reported more involvement than C2 hotels.

However, ES 12 **(**Refillable thermos flasks instead of mineral water bottles) has no impact of the number of rooms of hotels on actual implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 30 above. C1 hotels have maximum lowest mean scores (8 out of 13 variables). The most implemented ESP was the waste treatment sewage plant in C1 hotels (mean value 4.0). C2 and C3 hotels were more involved in purchasing goods in bulk (mean value above 4.1). C4 hotels reported sorting of waste according to type and waste sewage treatment plant as most implemented ESP (mean value 4.2, common for both variables), Laundry Paper/ Cloth bags rather than

plastic bags were found most practiced ESP in C5 hotels (mean value 4.5).

Table 31: Comparison of Waste Related ESPs by Category of Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

	One star (C1)	Two Star (C2)	Three Star (C3)	Four Star (C4)	Luxury hotels providing five star facilities (C5)	Luxury hotels providing five star deluxe facilities (C6)	F	P	Pairwise tests of significance**
ES03	3.50(.70)	4.20(.73)	3.55(1.00)	3.78(1.19)	4.20(.77)	4.66(.51)	4.07	.002*	C2>C3;C5>C3
ES04	3.50(2.12)	3.85(.97)	3.78(.95)	4.14(.91)	4.41(.68)	**4.83**(.40)	3.47	.005*	C5>C3
ES05	3.50(.70)	3.16(1.00)	2.39(1.30)	2.92(1.35)	4.10(.72)	3.00(.89)	8.68	.000*	C2>C3; C5>C2 C5>C3 C5>C4
ES06	2.50(2.12)	2.18(.92)	2.19(1.01)	3.20(1.20)	4.00(.75)	4.16(.75)	19.63	.000*	C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4
ES12	2.50(.70)	2.06(.87)	2.09(1.09)	2.47(1.35)	2.65(1.07)	3.50(1.37)	3.01	.012*	C6>C2 C6>C3
ES13	**4.50**(.70)	**4.22**(.68)	3.85(1.04)	3.90(1.00)	4.34(.66)	3.66(1.21)	2.08	.069	
ES31	**4.50**(.70)	3.91(1.01)	**4.08**(.78)	**4.25**(.88)	**4.44**(.63)	4.50(.83)	1.92	.092	
ES32	1.50(.70)	2.67(1.06)	3.04(1.31)	3.70(1.10)	4.24(.68)	4.33(.81)	12.93	.000*	C4>C1; C5>C1; C6>C1 C4>C2; C5>C2; C6>C2 C4>C3; C5>C3
ES34	1.50(.70)	1.93(.77)	2.34(1.16)	3.38(1.28)	3.96(.98)	3.16(.75)	18.94	.000*	C5>C1 C4>C2; C5>C2 C4>C3;C5>C3
ES35	1.50(.70)	2.24(.87)	3.01(1.04)	3.85(1.17)	4.34(.55)	4.33(.81)	25.01	.000*	C4>C1; C5>C1; C6>C1 C3>C2; C4>C2; C5>C2; C6>C2 C4>C3;C5>C3;C6>C3
ES36	3.50(.70)	3.51(.86)	3.42(1.14)	4.00(1.15)	4.44(.57)	4.66(.51)	6.26	.000*	C5>C2 C4>C3;C5>C3;C6>C3
ES37	4.50(.70)	3.69(.79)	3.34(1.09)	3.54(1.24)	4.48(.50)	3.16(1.16)	5.74	.000*	C5>C2 C5>C3 C5>C4 C5>C6
ES38	2.50(.70)	2.26(.70)	2.65(1.09)	3.43(1.13)	4.10(.67)	4.66(.51)	21.04	.000*	C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4;C6>C4

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of 11 out of thirteen variables of waste related ESPs based on the category of the hotels:

ES3 (Donation/sale of leftover food to local organizations)-C2 hotels and C5 hotels reported more involvement than C3 hotels.

ES4 (Sorting of waste according to type) - C5 hotels reported more involvement than C3 hotels.

ES5 (Donation/auction of hotel furniture) - C5 hotels are above C2 hotels; C3 hotels and C4 hotels.C2 hotels reported more implementation than C3 hotels.

ES6 (Composts organic kitchen waste) – C4 hotels are above C2 hotels and C3 hotels. C5 hotels reported more involvement than C2 hotels; C3 hotels and C4 hotels.C6 hotels were found more involved than C2 hotels and C3 hotels.

ES12 (Refillable thermos flasks instead of mineral water bottles) - C6 hotels were found more involved than C2 hotels and C3 hotels.

ES32 (Goods purchased are of recycled material) – C4 hotels and C5 hotels are above C1 hotels; C2 hotels and C3 hotels. C6 hotels were found more involved than C1 hotels and C2 hotels.

ES34 (Refillable amenity dispensers used rather than individual bottles for bathroom amenities) -– C5 hotels are above C1 hotels; C2 hotels and C3 hotels. C4 hotels are above C2 hotels and C3 hotels.

ES35 (Stationary from handmade or recycled paper) - C4 hotels; C5 hotels and C6 hotels are above C1 hotels; C2 hotels and C3 hotels. C3 hotels were found more involved than C2 hotels

ES36 (Laundry Paper/ Cloth bags rather than plastic bags) - C5 hotels reported more involvement than C2 hotels and C3 hotels. C4 hotels and C6 hotels are above C3 hotels.

ES37 (Recycled Biodegradable Garbage Bags) - C5 hotels are above C2 hotels; C3 hotels; C4 hotels and C6 hotels.

ES38 (Pencils and not plastic pens) - C4 hotels; C5 hotels and C6 hotels are above C2 hotels and C3 hotels. C5 hotels and C6 hotels are above C4 hotels

However, ES13 (Sewage treatment plant) and ES31 (Purchasing goods in bulk) have no effect of category of hotels on overall implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 31 above. The most implemented ESP was the waste treatment sewage plant in C1 and C2 hotels. C3; C4; and C5 hotels were found more involved in purchasing goods in bulk (mean value above 4.0).C6 reported sorting of waste according to type as most implemented ESPs (mean value 4.8).

Table 32: Comparison of Waste Related ESPs by Type of Ownership of Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

	Part of international chain or group (C1)	Part of locally operated chain or group (C2)	Locally owned and operated (C3)	F	P	Pairwise tests of significance**
ES03	4.17(.81)	3.65(1.10)	3.82(1.03)	4.47	.031*	C1>C2
ES04	**4.31**(.76)	3.95(.99)	3.82(.98)	5.43	.005*	C1>C3
ES05	3.40(1.21)	2.69(1.19)	2.86(1.31)	5.45	.005*	C1>C2;C1>C3
ES06	3.35(1.22)	2.32(1.12)	2.60(1.15)	12.8	.000*	C1>C2;C1>C3
ES12	2.71(1.31)	2.16(1.08)	2.09(.98)	6.34	.002*	C1>C2;C1>C3
ES13	4.20(.76)	4.08(.88)	3.86(1.03)	2.83	0.06	
ES31	4.29(.75)	**4.24**(.85)	**4.00**(.93)	2.6	0.08	
ES32	3.91(1.08)	3.16(1.14)	2.97(1.13)	13.8	.000*	C1>C2;C1>C3
ES34	3.49(1.17)	2.85(1.39)	2.17(1.03)	23.8	.000*	C1>C2; C1>C3 C2>C3
ES35	4.08(.96)	3.18(1.30)	2.68(1.04)	31.6	.000*	C1>C2; C1>C3 C2>C3
ES36	4.17(.88)	3.73(1.11)	3.51(1.09)	7.93	.000*	C1>C3
ES37	3.89(1.08)	3.69(1.06)	3.44(1.02)	3.52	.031*	C1>C3
ES38	3.85(1.03)	2.83(1.08)	2.52(.96)	33.2	.000*	C1>C2; C1>C3

Note: *p<0.05 denotes the significant difference in ESPs.

** $p<0.05$ to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA revealed that there was significant variance in practicing of 11 out of thirteen variables of waste related ESPs based on the ownership of the hotels.

The results are as follows:

ES3 (Donation/sale of leftover food to local organizations)-C1 hotels reported more implementation than C2 hotels.

ES4 (Sorting of waste according to type) - C1 hotels reported more implementation than C3 hotels.

ES5 (Donation/auction of hotel furniture) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES6 (Composts organic kitchen waste) – C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES12 (Refillable thermos flasks instead of mineral water bottles) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES32 (Goods purchased are of recycled material) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES34 (Refillable amenity dispensers used rather than individual bottles for bathroom amenities) - C1 hotels reported more implementation than C2 hotels and C3 hotels.C2 hotels were above C3 hotels.

ES35 (Stationary from handmade or recycled paper) - C1 hotels reported more implementation than C2 hotels and C3 hotels. C2 hotels were above C3 hotels.

ES36 (Laundry Paper/ Cloth bags rather than plastic bags) - C1 hotels reported more implementation than C3 hotels.

ES37 (Recycled Biodegradable Garbage Bags) - C1 hotels reported more implementation than C3 hotels.

ES38 (Pencils and not plastic pens) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

However, ES13 (Sewage treatment plant) and ES31 (Purchasing goods in bulk) have no effect of type of ownership of hotels on overall implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 32 above. The most implemented ESP was the sorting of waste in C1 hotels (mean value 4.3), while purchasing goods in bulk was most implemented in C2 and C3 hotels (mean score above 4.0).

Table 33: Comparison of Waste Related ESPs by Tariff of Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

	1000-3000 (C1)	3001-5000 (C2)	5001-7000 (C3)	Above 7000 (C4)	F	P	Pairwise tests of significance**
ES03	3.93(.92)	3.76(1.12)	4.20(.86)	3.83(.75)	1.454	.228	
ES04	3.73(1.01)	4.12(.89)	**4.44**(.57)	**4.66**(.51)	6.408	.000*	C2>C1;C3>C1
ES05	2.77(1.16)	2.95(1.33)	3.65(1.23)	3.83(1.16)	4.580	.004*	C3>C1 C3>C2
ES06	2.12(.80)	3.08(1.37)	3.62(.82)	4.33(.81)	23.052	.000*	C2>C1; C3>C1; C4>C1 C4>C2
ES12	2.01(.90)	2.56(1.18)	2.51(1.50)	2.50(1.37)	3.697	.013*	C2>C1
ES13	**4.11**(.85)	3.90(.96)	4.03(1.05)	4.50(.54)	1.295	.277	
ES31	3.91(.91)	**4.31**(.78)	4.41(.73)	4.33(1.03)	4.155	.007*	C2>C1;C3>C1
ES32	2.62(1.00)	3.67(1.09)	4.37(.62)	4.00(.89)	29.475	.000*	C2>C1; C3>C1; C4>C1 C3>C2
ES34	2.04(.84)	3.21(1.39)	3.62(1.04)	3.50(1.37)	22.069	.000*	C2>C1;C3>C1;C4>C1
ES35	2.47(.91)	3.67(1.18)	4.27(.75)	**4.66**(.51)	36.127	.000*	C2>C1; C3>C1; C4>C1 C3>C2;C4>C2
ES36	3.49(.97)	3.91(1.11)	4.17(1.07)	4.50(.54)	4.963	.002*	C2>C1;C3>C1
ES37	3.57(.87)	3.65(1.25)	3.82(1.07)	4.00(1.09)	.621	.602	
ES38	2.36(.83)	3.38(1.14)	3.82(1.07)	4.33(.81)	25.576	.000*	C2>C1;C3>C1;C4>C1

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of 10 out of thirteen variables of waste related ESPs based on the tariff of the hotels.

The results are as follows:

ES4 (Sorting of waste according to type) – C2 hotels and C3 hotels reported more implementation than C1 hotels

ES5 (Donation/auction of hotel furniture) – C3 hotels reported more implementation than C1 hotels and C2 hotels.

ES6 (Composts organic kitchen waste) – C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.C4 hotels are above C2 hotels.

ES12 (Refillable thermos flasks instead of mineral water bottles) - C2 hotels are above C1 hotels.

ES31 (Purchasing goods in bulk) - C2 hotels and C3 hotels reported more implementation than C1 hotels

ES32 (Goods purchased are of recycled material) - C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.C4 hotels are above C2 hotels.

ES34 (Refillable amenity dispensers used rather than individual bottles for bathroom amenities) - C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.

ES35 (Stationary from handmade or recycled paper) - C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.C3 hotels and C4 hotels are above C2 hotels.

ES36 (Laundry Paper/ Cloth bags rather than plastic bags) - C2 hotels and C3 hotels reported more implementation than C1 hotels

ES38 (Pencils and not plastic pens) - C2 hotels; C3 hotels and C4 hotels reported more implementation than C1 hotels.

However, ES3 (Donation/sale of leftover food to local organizations), ES13 (Sewage treatment plant) and ES37 (Recycled Biodegradable Garbage Bags), have no effect of tariff of hotels on overall implementation.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 33 above. Waste sewage treatment plant was most implemented practice among the C1 hotels (mean value 4.1).C2 hotels purchased goods in bulk (mean value 4.3). C3 and C4 hotels were more involved in sorting of waste (mean value 4.4 and 4.6 respectively). C4 hotels were also equally involved in purchasing handmade or recycled paper stationary (mean value 4.6).

Dimension 4: Water Related ESP

The next factor of ESPs was Water Related ESPs. It contains 07 variables. These variables were measured against the different characteristics of hotels.

Table 34: Comparison of Water Related ESPs by Number of Rooms in Hotels (Complete Dataset N=202)

ANOVA and Tukey's HSD

	10-25 (C1)	26-50 (C2)	51-75 (C3)	76-100 (C4)	Above 100 (C5)	F	P	Pairwise tests of significance**
ES07	3.83(.89)	4.01(1.01)	4.51(.55)	4.36(.67)	4.57(.50)	6.21	.000*	C2>C1; C5>C1 C3>C2
ES08	3.52(1.02)	3.93(.81)	4.46(.64)	4.45(.52)	4.28(.71)	9.96	.000*	C3>C1; C4>C1; C5>C1 C3>C2
ES09	3.42(1.23)	3.89(1.08)	4.51(.55)	4.54(.52)	4.33(.73)	9.62	.000*	C3>C1; C4>C1; C5>C1 C3>C2
ES10	3.19(1.13)	3.93(1.07)	4.12(1.00)	4.36(.80)	4.42(.59)	10.24	.000*	C2>C1; C3>C1; C4>C1; C5>C1
ES11	1.49(.68)	2.06(1.24)	2.33(1.24)	3.36(1.62)	3.28(.84)	16.93	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C4>C2;C5>C2
ES17	1.80(1.00)	2.67(1.28)	2.82(1.33)	3.72(1.10)	3.19(.87)	12.58	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C4>C2;C5>C2
ES19	2.06(.96)	2.96(1.26)	3.41(1.31)	3.63(1.12)	4.04(.86)	18.48	.000*	C2>C1; C3>C1; C4>C1; C5>C1 C5>C2

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of all 07 variables of water related ESPs based on the number of rooms of the hotels.

ES7 (Water efficient appliances) –C2 hotels and C5 hotels have reported more implementation than C1 hotels.C3 hotels were above C2 hotels.

ES8 (Low flow shower heads) – C3 hotels; C4 hotels and C5 hotels have reported more implementation than C1 hotels.C3 hotels were above C2 hotels.

ES9 (Low flow or dual flush toilets) – C3 hotels; C4 hotels and C5 hotels have reported more implementation than C1 hotels.C3 hotels were above C2 hotels.

ES10 (Faucets aerators) - C2 hotels; C3 hotels; C4 hotels and C5 hotels have reported more implementation than C1 hotels.

ES11 (Rainwater harvesting) - C2 hotels; C3 hotels; C4 hotels and C5 hotels have reported more implementation than C1 hotels. C4 hotels and C5 hotels were above C2 hotels.

ES17 (Implementing water efficient gardening programs (e.g. using treated water in garden irrigation or adopting xeric gardening techniques) - C2 hotels; C3 hotels; C4 hotels and C5 hotels have reported more implementation than C1 hotels. C4 hotels and C5 hotels were above C2 hotels.

ES19 (Encouraging guest to reuse towels and bed linen) - C2 hotels; C3 hotels; C4 hotels and C5 hotels have reported more implementation than C1 hotels.C5 hotels were above C2 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 34 above. Water efficient equipment was the most implemented ESPs in all categories of hotels (mean value above 3.8) irrespective of C4. In C3 (in addition to water efficient equipment) and C4 Low flow or dual flush toilets was most implemented practice (mean value above 4.5).

Table 35: Comparison of Water Related ESPs by Category of Hotels (Complete Dataset N=202)

	One star (C1)	Two Star (C2)	Three Star (C3)	Four Star (C4)	Luxury hotels providing five star facilities (C5)	Luxury hotels providing five star deluxe facilities (C6)	F	P	Pairwise tests of significance**
ES07	2.50(.70)	**3.85**(.91)	**4.06**(.83)	4.18(.94)	**4.55**(.50)	**4.83**(.40)	4.95	.000*	C5>C1; C6>C1 C5>C2
ES08	**3.00**(1.41)	3.36(1.14)	3.90(.72)	4.27(.73)	4.41(.62)	4.33(.81)	8.79	.000*	C3>C2;C4>C2;C5>C 2
ES09	1.50(.70)	3.14(1.29)	3.85(.99)	**4.49**(.57)	4.34(.66)	4.66(.81)	15.35	.000*	C3>C1; C4>C1; C5>C1; C6>C1 C3>C2; C4>C2; C5>C2; C6>C2 C4>C3
ES10	2.50(.70)	3.10(1.22)	3.73(.98)	4.10(1.11)	4.41(.56)	4.00(.89)	8.13	.000*	C3>C2; C4>C2; C5>C2 C5>C3
ES11	1.50(.70)	1.40(.49)	1.75(1.10)	2.32(1.32)	3.44(.90)	3.16(.40)	18.05	.000*	C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4
ES17	1.50(.70)	1.59(.60)	2.29(1.25)	2.83(1.25)	3.58(1.01)	4.00(.89)	16.74	.000*	C3>C2; C4>C2;

ANOVA and Tukey's HSD

									C5>C2; C6>C2 C5>C3; C6>3 C5>C4
ES19	2.50(.70)	1.97(.69)	2.47(1.20)	3.32(1.29)	4.06(.96)	4.50(.54)	20.22	.000*	C4>C2; C5>C2; C6>C2 C4>C3; C5>C3; C6>C3 C5>C4

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one- way ANOVA and Tukey's HSD explored that there was significant variance in practicing of all 07 variables of water related ESPs based on the category of the hotels.

The results are as follows:

ES7 (Water efficient appliances) –C5 hotels and C6 hotels were more involved in this variable than C1 hotels.C5 hotels were also above the C2 hotels.

ES8 (Low flow showerheads) – C3 hotels; C4 hotels and C5 hotels were more involved in this variable than C2 hotels.

ES9 (Low flow or dual flush toilets) - C3 hotels; C4 hotels; C5 hotels and C6 hotels were more involved in this variable than C1 hotels and C2 hotels. C4 hotels were also above the C3 hotels.

ES10 (Faucets aerators) - C3 hotels; C4 hotels and C5 hotels were more involved in this variable than C2 hotels. C5 hotels were also above the C3 hotels.

ES11 (Rainwater harvesting) - C4 hotels; C5 hotels and C6 hotels were more involved in this variable than C2 hotels and C3 hotels. C5 hotels were also above the C4 hotels.

ES17 (Implementing water efficient gardening programs (e.g. using treated water in garden irrigation or adopting xeric gardening techniques) - C3 hotels; C4 hotels; C5 hotels and C6 hotels were more involved in this variable than C2 hotels. C5 hotels and C6 hotels were more involved in this variable than C3 hotels. C5 hotels were also above the C4 hotels.

ES19 (Encouraging guest to reuse towels and bed linen) - C4 hotels; C5 hotels and C6 hotels were more involved in this variable than C2 hotels and C3 hotels. C5 hotels

	Part of international chain or group (C1)	Part of locally operated chain or group (C2)	Locally owned and operated (C3)	F	P	Pairwise tests of significance**
ES07	**4.46**(.61)	3.93(1.04)	**3.96**(.88)	7.95	.000*	C1>C2; C1>C3

were also above the C4 hotels.

The results of Means, Standard Deviations (SDs), Analysis of variance (ANOVA) and Tukey's post-hoc testing are presented in table 35 above. Water efficient equipment was the most implemented ESPs in all categories of hotels (mean value above 3.8) irrespective of C1 and C4. In C1 Low flow shower heads was most implemented ESP (mean value 3.0), while in C4 Low flow or dual flush toilets was most implemented practice (mean value 4.4).

Table 36: Comparison of Water Related ESPs by Type of Ownership of Hotels (Complete Dataset N=202)
ANOVA and Tukey's HSD

ES08	4.23(.65)	3.81(1.01)	3.80(1.00)	5.08	.000*	C1>C2; C1>C3
ES09	4.25(.85)	**4.04**(1.04)	3.60(1.21)	7.39	.000*	C1>C3
ES10	4.07(.92)	3.75(1.21)	3.55(1.17)	4.09	.000*	C1>C3
ES11	2.71(1.33)	2.06(1.23)	1.66(.87)	16.32	.000*	C1>C2; C1>C3
ES17	3.20(1.22)	2.34(1.28)	2.03(1.07)	19.18	.000*	C1>C2; C1>C3
ES19	3.67(1.17)	2.69(1.32)	2.36(1.10)	23.85	.000*	C1>C2; C1>C3

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored that there was significant variance in practicing of all 07 variables of water related ESPs based on the type of ownership of the hotels.

ES7 (Water efficient appliances) –C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES8 (Low flow shower heads) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES9 (Low flow or dual flush toilets) –C1 hotels were above C3 hotels.

ES10 (Faucets aerators) - C1 hotels were above C3 hotels.

ES11 (Rainwater harvesting) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES17 (Implementing water efficient gardening programs (e.g. using treated water in garden irrigation or adopting xeric gardening techniques) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

ES19 (Encouraging guest to reuse towels and bed linen) - C1 hotels reported more implementation than C2 hotels and C3 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 36 above. Water efficient equipment was the most implemented ESPs in C1 and C3 hotels (mean value above

3.9), while C2 reported Low flow or dual flush toilets as most implemented practice (mean value 4.0).

Table 37: Comparison of Water Related ESPs by Tariff of Hotels (Complete Dataset N=202)
ANOVA and Tukey's HSD

Note: *p<0.05 denotes the significant difference in ESPs.

** p<0.05 to measure pairwise significance tests via Tukey's HSD.

When analyzing data from the complete sample, the results of one-way ANOVA and Tukey's HSD explored significant variance in practicing of all 07 variables of water related ESPs based on the tariff of the hotels.

	1000-3000 (C1)	3001-5000 (C2)	5001-7000 (C3)	Above 7000 (C4)	F	P	Pairwise tests of significance**
ES07	**3.85**(.88)	4.23(.91)	**4.51**(.50)	**4.66**(.51)	6.40	.000*	C2>C1; C3>C1
ES08	3.55(1.02)	4.21(.72)	4.27(.70)	**4.66**(.51)	11.51	.000*	C2>C1; C3>C1; C4>C1
ES09	3.43(1.22)	**4.25**(.84)	4.37(.77)	4.50(.54)	11.97	.000*	C2>C1; C3>C1
ES10	3.25(1.10)	4.13(1.01)	4.17(.92)	**4.66**(.51)	13.60	.000*	C2>C1; C3>C1; C4>C1
ES11	1.37(.51)	2.46(1.27)	3.20(1.29)	2.66(1.21)	30.06	.000*	C2>C1; C3>C1; C4>C1 C3>C2
ES17	1.86(.99)	2.78(1.20)	3.44(1.21)	3.33(1.86)	18.46	.000*	C2>C1; C3>C1; C4>C1 C3>C2
ES19	2.02(.77)	3.33(1.25)	4.03(1.11)	3.50(1.64)	35.77	.000*	C2>C1; C3>C1; C4>C1 C3>C2

The results are as below:

ES7 (Water efficient appliances) –C2 hotels and C3 hotels were more involved in practicing this variable than C1 hotels.

ES8 (Low flow showerheads) - C2 hotels; C3 hotels and C4 hotels were more involved in practicing this variable than C1 hotels.

ES9 (Low flow or dual flush toilets) - C2 hotels and C3 hotels were more involved in practicing this variable than C1 hotels.

ES10 (Faucets aerators) - C2 hotels; C3 hotels and C4 hotels were more involved in practicing this variable than C1 hotels.

ES11 (Rainwater harvesting) - C2 hotels; C3 hotels and C4 hotels were more involved in practicing this variable than C1 hotels.C3 hotels were also above the C2 hotels.

ES17 (Implementing water efficient gardening programs (e.g. using treated water in garden irrigation or adopting xeric gardening techniques) - C2 hotels; C3 hotels and C4 hotels were more involved in practicing this variable than C1 hotels.C3 hotels were also above the C2 hotels.

ES19 (Encouraging guest to reuse towels and bed linen) - C2 hotels; C3 hotels and C4 hotels were more involved in practicing this variable than C1 hotels.C3 hotels were also above the C2 hotels.

The results of Means, Standard Deviations (SDs), Analysis of Variance (ANOVA) and Tukey's post-hoc testing are presented in table 37 above. Water efficient equipment was the most implemented ESPs in C1 and C3 hotels (mean value above 3.8), while C2 reported Low flow or dual flush toilets as most implemented practice (mean value 4.2). C4 reported water efficient appliances, low flow showerhead and water faucets aerators as most implemented ESPs (mean value 4.6, common for all variables).

4.4. Results for Analyses Related to Research Question 2: What is the attitude of managers towards environmental sustainable practices?

Analysis of managerial environmental attitude provided the answer to second objective. Fifteen variables were decided to measure the construct of managerial environmental attitude with the support of broad review of literature.

The responses collected through primary data were evaluated by the help of two-step cluster analysis. The variables measured the attitude of the respondents towards various ESPs in the hotel industry of Punjab and environmental issues. The data was collected with the help of Likert scale.

The responses were measured through two-step cluster analysis followed by cross tabulation of clusters with various other variables to prepare the profile of

respondents. Chi-square test helped to test the framed hypotheses. The results were presented in the tables given below.

Table 38 represents the results of auto clustering using the Bayesian Information Criteria (BIC). The smaller values of the BIC indicate about good model. The BIC values in Auto Clustering table suggested a two cluster solution because at cluster 2, BIC value is minimum and afterwards shows a change in values i.e. initially the values are decreasing and after cluster 2, it shows an increasing trend. In addition, the BIC change at two-cluster solution is maximum in magnitude. Hence, two-cluster solution was found most appropriate.

Table 38: Auto-Clustering of Managerial Environmental Attitude

Number of Clusters	Schwarz's Bayesian Criterion (BIC)	BIC Change[a]	Ratio of BIC Changes[b]	Ratio of Distance Measures[c]
1	4391.371			
2	3813.76	-577.611	1	3.088
3	3784.638	-29.122	0.05	1.094
4	3778.035	-6.603	0.011	1.833
5	3880.587	102.551	-0.178	1.037
6	3987.796	107.21	-0.186	1.185
7	4114.766	126.97	-0.22	1.006
8	4242.33	127.563	-0.221	1.265
9	4392.092	149.762	-0.259	1.059
10	4546.55	154.458	-0.267	1.202
11	4714.317	167.766	-0.29	1.17
12	4891.631	177.315	-0.307	1.016
13	5069.844	178.212	-0.309	1.058
14	5251.098	181.254	-0.314	1.001
15	5432.407	181.31	-0.314	1.012

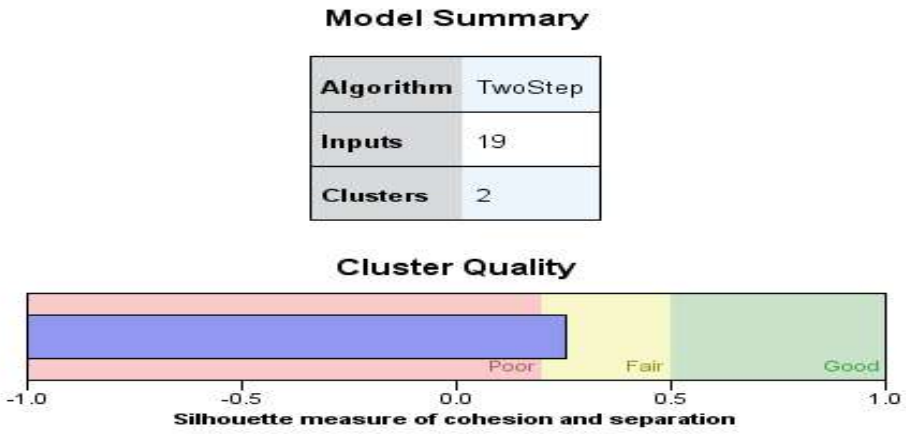
a. The changes are from the previous number of clusters in the table.

b. The ratios of changes are relative to the change for the two cluster solution.

c. The ratios of distance measures are based on the current number of clusters against the previous number of clusters.

The goodness of fit of the model reported by BIC techniques is explained through figure 6 below.

Figure 6: Model Summary



The figure 6 reveal the possibility of two things; first, whether there are distinct clusters and second, the elements of clusters obtained are similar in characteristics. The BIC results reported coefficient in the range -1.0 to + 1.0 However, a coefficient between –0.5 to +1.0 is considered fair and accepted. BIC method establishes two distinct clusters with 'fair' cohesion within the obtained clusters and 'fair' difference between them.

Table 39 below shows the cluster distribution. There are 111 numbers of cases in cluster 1 and 91 numbers of cases in cluster 2.

Table 39: Cluster Distribution of Managerial Environmental Attitude

		N	% of Combined	% of Total
Cluster	1	111	55.0%	55.0%
	2	91	45.0%	45.0%
	Combined	202	100.0%	100.0%
Total		202		100.0%

The cluster distribution table reports the frequency of both the cluster. There were total 202 cases out of which 111 cases were allotted to the cluster one and 91 to the cluster two.

Interpretation of Cluster

The cluster centroids are examined for the purpose of interpretation of clusters. The table 40 below shows the cluster centroid based on fifteen environmental attitudes of managers.

Table 40: Centroids

		Cluster		
		1	2	Combined
EA1Environment helps to attract tourists to a destination	Mean	2.7838	4.1648	3.4059
	Std. Deviation	1.15527	0.99179	1.28271
EA4Hotels are seriously abusing the environment.	Mean	1.8198	2.022	1.9109
	Std. Deviation	0.87592	0.85606	0.87074
EA5Hotels have plenty ways to sustain the natural resources if we just learn how to execute them	Mean	3.7928	4.1099	3.9356
	Std. Deviation	0.84334	0.73712	0.81088
EA6Hotels have right to modify the natural environment to suit their needs	Mean	2.2793	2.2198	2.2525
	Std. Deviation	1.08855	1.20002	1.13761
EA8Humans were meant to rule over the rest of nature	Mean	1.6216	1.7692	1.6881
	Std. Deviation	0.58859	1.0119	0.80839
EA90If things continue on their present course, we will soon experience a major ecological disaster	Mean	3.8378	4.2967	4.0446
	Std. Deviation	0.90995	0.80959	0.89387
EA10Certificated environmentally friendly hotel (eco-labeled) make a change on your hotel image	Mean	2.5586	3.9341	3.1782
	Std. Deviation	1.14958	0.9978	1.28052
EA11luxury and environmental friendliness could be combine/integrate	Mean	2.4685	3.9341	3.1287
	Std. Deviation	1.0429	0.97527	1.24719
EA12Customers will be ready to pay more (because of the hotel environmental sustainable practices)	Mean	2.0631	3.5055	2.7129
	Std. Deviation	0.86633	1.11926	1.22036
EA13By implementing environmental sustainable practices, it be possible to enchain a new type of customers	Mean	2.8288	3.8901	3.3069
	Std. Deviation	1.07766	0.9481	1.14816

EA2Mass humans activities interfere with nature and it often produces disastrous consequences	Mean	3.5495	4.2418	3.8614
	Std. Deviation	0.93165	0.80747	0.94136
EA3Hotel industry should follow the laws of nature	Mean	3.8378	4.1978	4
	Std. Deviation	0.8371	0.81948	0.84641
EA7Hotel ingenuity will insure that we do not make the Earth un-live able	Mean	3.7297	3.7253	3.7277
	Std. Deviation	0.95295	1.0335	0.98755
EA14Would you be ready to go for environmental certification?	Mean	3.4685	4.1429	3.7723
	Std. Deviation	0.8182	0.65949	0.82113
EA15What do you think – would the hotel (hotel management, hotel owners) be ready to invest some money and time to become more environmentally friendly or even to get some official environmental certificate/label?	Mean	3.5225	4.044	3.7574
	Std. Deviation	0.90299	0.80156	0.8953

The centroid reported that both clusters are significantly parted by the continuous variables.

It is clear from the above table that EA6, EA7 and EA8 is equally important for all the respondents of both the clusters.

The following are the characteristics of respondents of two clusters based on table 40

1. The respondents of cluster one is found with less positive pro-environmental attitudes in comparison to cluster two respondents. Respondent of this cluster reported lesser agreement towards getting green certification, benefits of going green, the adverse influence of hotel businesses on the surrounding environment, following the law of nature etc.

2. The respondents of cluster two is found having more positive pro-environmental attitudes in comparison to the respondents of cluster one. Environmental attitudes EA1, EA2, EA3, EA4, EA5, EA9, EA10, EA11, EA12, EA13, EA14, EA15 received more positive response from the respondents of cluster two in comparison to respondents of cluster one.

Comparison of Managerial Environmental Attitudes by Number of Rooms of Hotels (Complete Dataset N=202)

To evaluate the effect of number of rooms of hotels on managerial environmental the following null hypothesis was developed:

H_{o2a}: There is no significant difference between attitudes of managers on the basis of number of rooms of hotels

The above mentioned hypothesis was tested through Chi square test to determine whether significant difference exists in managerial environmental attitudes based on the number of rooms of hotels. The following tables explain the results.

Table 41: Comparison of Managerial Environmental Attitudes by Number of Rooms of Hotels

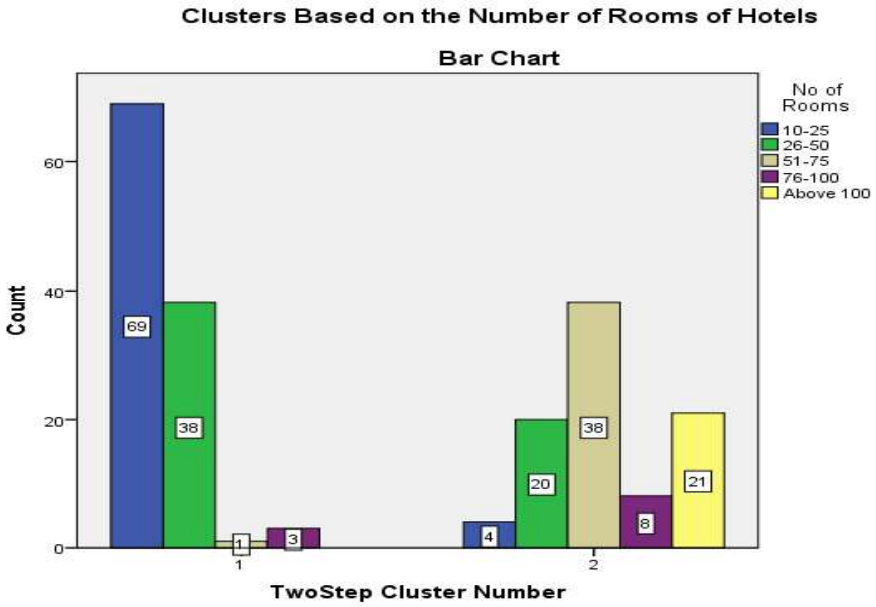
		Cluster		
		1	2	Combined
10-25	Frequency	69	4	73
	Percent	94.5%	5.5%	100.0%
26-50	Frequency	38	20	58
	Percent	65.5%	34.5%	100.0%
51-75	Frequency	1	38	39
	Percent	2.6%	97.4%	100.0%
76-100	Frequency	3	8	11
	Percent	27.3%	72.7%	100.0%
Above 100	Frequency	0	21	21
	Percent	0.0%	100.0%	100.0%

The cluster frequency table by number of rooms of hotels additionally explains the characteristics of both the clusters.

Cluster 1 majorly comprises small hotels having up to 50 rooms (94.5% of hotels having 10-25 rooms and 65.5% of hotels having 26-50 rooms).

Cluster 2 majorly comprises large hotels having above 50 rooms (97.4% of hotels having 51-75 rooms; 72.7% of hotels having 76-100 rooms and 100% of hotels having above 100 rooms).

Figure 7: Clusters based on Number of Rooms of Hotels



The Figure 7 graphically shows the contribution of number of rooms of respondent hotels within each of the two clusters.

Table 42: Main Effect of Number of Rooms of Hotels on Managerial Environmental Attitudes.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	121.045[a]	4	.000
Likelihood Ratio	150.120	4	.000
Linear-by-Linear Association	98.086	1	.000
N of Valid Cases	202		

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.96.

Note: *p<0.05 denotes difference in managerial environmental attitudes.

The Chi-Square test was applied to check the effect of number of rooms of hotels on managerial environmental attitudes. In this case, the Pearson chi square value is 121.045. The relationship among the two variables is statistically confirmed significant if Asymptotic Significance (2-sided) is equal to or less than designated alpha (p) value (normally 0.05) and that is clearly visible in the case here. The p value under the column of "Asymptotic significance (2-sided) is 0.000. Significance is

denoted by "p" that is the short form of probability. The probability is outcome of our observed sample in case our variables are independent of the total population.

The outcomes of Chi-square test with probability 0.000 in this case reveal the significant difference in managerial environmental attitudes depending upon the number of rooms of the hotels. The Null hypothesis was rejected on the basis of above mentioned results.

Comparison of Managerial Environmental Attitudes by Category of Hotels (Complete Dataset N=202)

To evaluate the effect of category of hotels on managerial environmental the following null hypothesis was developed:

H_{o2b}: There is no significant difference between attitudes of managers on the basis of category of hotels.

The above mentioned hypothesis was tested through Chi square test to determine whether difference in managerial environmental attitudes exists based on the category of hotels. The following tables explain the results.

Table 43: Comparison of Managerial Environmental Attitudes by Category of Hotels

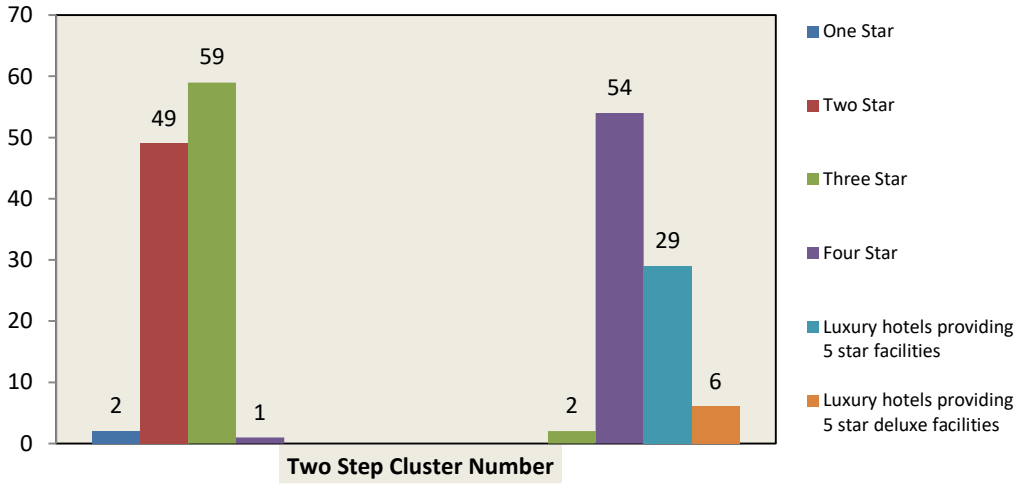
		Cluster		
		1	2	Combined
one star	Frequency	2	0	2
	Percent	100.00%	0.00%	100.00%
Two Star	Frequency	49	0	49
	Percent	100.00%	0.00%	100.00%
Three Star	Frequency	59	2	61
	Percent	96.70%	3.30%	100.00%
Four Star	Frequency	1	54	55
	Percent	1.80%	98.20%	100.00%
Luxury hotels providing five star facilities	Frequency	0	29	29
	Percent	0.00%	100.00%	100.00%
Luxury hotels providing five star deluxe facilities	Frequency	0	6	6
	Percent	0.00%	100.00%	100.00%

The cluster frequency table by category of hotels additionally explains the characteristics of both the clusters.

Cluster 1 comprises entire hotels related to one-star category and two star categories. Most of the three star categories of hotels (96.7%) also comes under cluster one. There is only one (1.8%) four-star category of hotel in this cluster.

Cluster 2 comprises entire hotels related to luxury hotels providing five star facilities and luxury hotels providing five star deluxe facilities. Most of the four star categories of hotels (98.2%) also comes under cluster two. There are only two three star categories of hotel (3.3%) in this cluster.

Figure:8 Clusters Based on the Category of Respondent Hotels



The Figure 8 above graphically reported the contribution of category of respondent hotels within each of the two clusters.

Table 44: Main Effect of Category of Hotels On Managerial Environmental Attitudes

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	190.220[a]	5	.000*
Likelihood Ratio	250.447	5	.000*
Linear-by-Linear Association	143.604	1	.000*
N of Valid Cases	202		

a. 4 cells (33.3%) have expected count less than 5. The minimum expected count is .90.

Note: *p<0.05 denotes difference in managerial environmental attitudes.

The Chi-Square test was used to check the effect of number of rooms of hotels on managerial environmental attitudes. In this case, the Pearson chi square value is 190.220. The relationship among the two variables is statistically confirmed significant if Asymptotic Significance (2-sided) is equal to or less than designated alpha (p) value (normally 0.05) and that is clearly visible in the case here. The p value under the column of "Asymptotic significance (2-sided) is 0.000. Significance is denoted by "p" that is the short form of probability. The probability is outcome of our observed sample in case our variables are independent of the total population.

The outcomes of Chi-square test with probability 0.000 in this case reveal the statistically significant difference in environmental attitudes depending upon the category of the hotels. The Null hypothesis was rejected on the basis of above mentioned results.

Comparison of Managerial Environmental Attitudes by Type of Ownership of Hotels (Complete Dataset N=202)

To evaluate the effect of type of ownership of hotels on managerial environmental attitude, the following null hypothesis was developed:

H_{o2c}: There is no significant difference between attitudes of managers on the basis of type of ownership of hotels.

This hypothesis was evaluated through Chi square test to determine whether difference in managerial environmental attitudes exists based on the type of ownership of hotels. The following tables explain the results.

Table 45: Comparison of Managerial Environmental Attitudes by Type of Ownership of Hotels

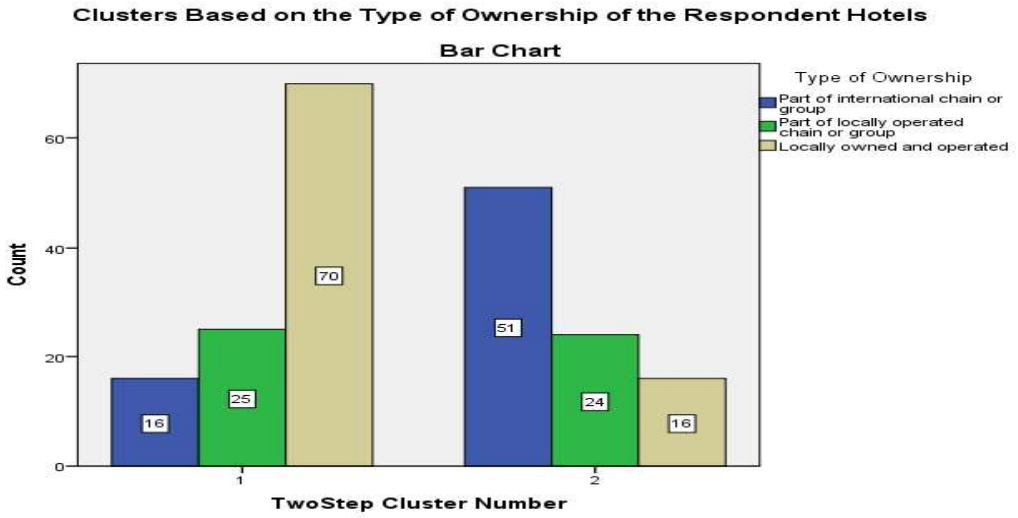
		Cluster		
		1	2	Combined
Part of international chain or group	Frequency	16	51	67
	Percent	23.9%	76.1%	100.0%
Part of locally operated chain or group	Frequency	25	24	49
	Percent	51.0%	49.0%	100.0%
Locally owned and operated	Frequency	70	16	86
	Percent	81.4%	18.6%	100.0%

The cluster frequency table by type of ownership of hotels additionally explains the characteristics of both the clusters.

Cluster 1 comprises majorly locally owned and operated hotels (81.4%) and hotels that are operated by local chains (51%). Hotels belonging to international chain or group contribute lesser in this cluster (23.9%).

Cluster 2 comprises majorly hotels belonging to international chain or group (76.1%). Hotels that are operated by local chains contribute (49%). The contribution of locally owned and operated hotels is significantly low (18.6%).

Figure9: Clusters Based on the Types of the Respondent Hotels



The Figure 9 above graphically reported the contribution of type of ownership of respondent hotels within each of the two clusters.

Table 46: Main Effect of Type of Ownership of Hotels on Managerial Environmental Attitudes.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	50.728[a]	2	.000
Likelihood Ratio	53.845	2	.000
Linear-by-Linear Association	50.438	1	.000
N of Valid Cases	202		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 22.07.

Note: *p<0.05 denotes difference in managerial environmental attitudes.

The Chi-Square test was used to check the effect of type of ownership of hotels on managerial environmental attitudes. In this case, the Pearson chi square value is 50.728. The association among the two variables is statistically confirmed significant if Asymptotic Significance (2-sided) is equal to or less than designated alpha (p) value (normally 0.05) and that is clearly visible in the case here. The p value under the column of "Asymptotic significance (2-sided) is 0.000. Significance is denoted by "p" that is the short form of probability. The probability is outcome of our observed sample in case our variables are independent of the total population.

The outcomes of Chi-square test with probability 0.000 in this case reveal the statistically significant difference in environmental attitudes depending upon the type of ownership of the hotels. The Null hypothesis was rejected on the basis of above mentioned results.

Comparison of Managerial Environmental Attitudes by Tariff of Hotels (Complete Dataset N=202)

To evaluate the effect of tariff of hotels on managerial environmental the following null hypothesis was developed:

H_{02d}: There is no significant difference between attitudes of managers on the basis of tariff of hotels

Table 47: Comparison of Managerial Environmental Attitudes by Tariff of Hotels

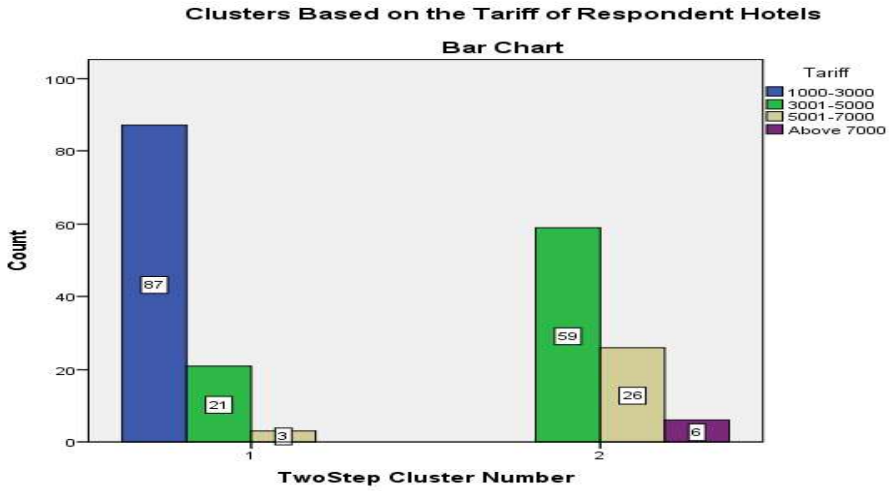
		Cluster		
		1	2	Combined
1000-3000	Frequency	87	0	87
	Percent	100.0%	0.0%	100.0%
3001-5000	Frequency	21	59	80
	Percent	26.3%	73.8%	100.0%
5001-7000	Frequency	3	26	29
	Percent	10.3%	89.7%	100.0%
Above 7000	Frequency	0	6	6
	Percent	0.0%	100.0%	100.0%

The cluster frequency table by tariff of hotels additionally explains the characteristics of both the clusters.

Cluster 1 comprises all the hotels (100%) having tariff between 1000-3000.Hotels having tariff between 3001-5000 contributed less (26.3%) while there are only three hotels (10.3%) having tariff between 5001-7000.

Cluster 2 comprises all the hotels (100%) having tariff above 7000. Hotels having tariff between 5001-7000 also represented significantly (89.7%). Hotels having tariff between 3001-5000 also reported the good presence (73. 8%). However, there was no hotel in this cluster that have tariff between 1000-3000.

Figure10: Clusters Based on the Tariff of Respondent Hotels



The Figure 10 above graphically reported the contribution of tariff of respondent hotels within each of the two clusters.

Table 48: Main Effect of Tariff of Hotels on Managerial Environmental Attitudes. Chi-Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	128.572[a]	3	.000
Likelihood Ratio	166.653	3	.000
Linear-by-Linear Association	107.015	1	.000
N of Valid Cases	202		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is 2.70.

Note: *p<0.05 denotes difference in managerial environmental attitudes.

The Chi-Square test was applied to check the effect of tariff of hotels on managerial environmental attitudes. In this case, the Pearson chi square value is 128.572. The relationship among the two variables is statistically confirmed significant if Asymptotic Significance (2-sided) is equal to or less than designated alpha (p) value (normally 0.05) and that is clearly visible in the case here. The p value under the column of "Asymptotic significance (2-sided) is 0.000. Significance is denoted by "p" that is the short form of probability. The probability is outcome of our observed sample in case our variables are independent of the total population.

The outcomes of Chi-square test with probability 0.000 in this case reveal the statistically significant difference in environmental attitudes depending upon the tariff of the hotels. The Null hypothesis was rejected on the basis of above mentioned results.

Discussions

Two-step clusters provided the following results:

The first cluster contains mostly smaller and low category of hotels with less tariff rates. The hotels of this cluster are majorly locally owned or operated by local chains. The respondents of this cluster are found having less positive environmental attitudes.

The second cluster contains mostly larger and high category of hotels with more tariff rates. The hotels of this cluster are majorly the part of international group or chains. The respondents of this cluster are having more positive environmental attitudes.

Chi-Square test reported the significant difference in managerial environmental attitudes based on the number of rooms of hotels; category of hotels; type of ownership of hotels and tariff of hotels.

4.5. Results of Analysis Related to Research Question 3: Is there any relationship between managerial environmental attitude and the number of environmental sustainable practices implemented in their hotels?

The analysis of relationship of managerial environmental attitude and the number of ESPs provided the answer to third objective. Fifteen variables were finalized to measure the managerial environmental attitude with the support of extensive review of literature. The ESPs were measured with the help of 39 variables. The responses were collected with the help of Likert scale. The following null hypothesis has been developed to identify the relationship.

H_{o3}: There is no significant relationship between managerial environmental attitude and the number of environmental sustainable practices implemented in the hotels.

The relationship was evaluated in two stages. Initially; factor analysis was used to make the factors of the managerial environmental attitude followed by rotated component matrix to make the interpretation easier. Finally; the hypothesis framed was tested using multiple regression analysis to find out the association among managerial environmental attitude and the number of ESPs.

Stage one of analysis

The following tables present the results of first stage of factor analysis.

Table 49: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	519.576
	Df	45
	Sig.	.000

High value of KMO (close to 1.0) indicates the appropriateness of factor analysis for the data. In table 49 KMO Sampling Adequacy value is .820 that is close to 1.0 and shows that factor analysis is appropriate for this data.

Bartlett's Test of Sphericity is significant (.000) less than 0.05 and this indicates appropriateness of factor analysis for this data. These results are consistent to the results of study (Sarmah & Nim, 2019) .

Table 50: Rotation Sums of Squared Loadings for Managerial Environmental Attitude

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.507	35.065	35.065	**3.507**	35.065	35.065	3.111	31.114	31.114
2	1.459	14.589	49.654	**1.459**	14.589	49.654	1.443	14.426	45.540
3	1.021	10.211	59.865	**1.021**	10.211	59.865	1.432	14.325	**59.865**
4	.865	8.652	68.517						
5	.748	7.483	76.000						
6	.661	6.611	82.611						
7	.556	5.564	88.175						
8	.501	5.007	93.182						
9	.381	3.810	96.992						
10	.301	3.008	100.000						

Extraction Method: Principal Component Analysis.

Rotation Sums of Squared Loadings have been considered for analysis and interpretation. A common rule of thumb for Eigenvalues is to select the components that have Eigenvalues more than 1. The above table 50 reported that our first 3 components have an Eigenvalue of at least 1. The other components have less value and are not anticipated to represent the actual quality of our 10 items (5 items have been removed due to less value of factor loadings).

The 1st component account for 35.065% of the variance, the 2nd component account for 14.589% variance and the 3rd component account for 10.211% variance. The overall percentage of variance is 59.865%. All other factors are not important.

Scree Plot- "The scree plot shows the plot between number of factors and Eigen value".

The point of attention is steep curve before the curve line starts to flatten. It is noted that curve line starts to flatten between factor 3 and 4. The eigenvalues of first 3 factors are greater than 1 and after factor 3 the eigenvalues are less than 1, so only three factors have been retained.

Figure 11: Scree Plot for Factor Analysis

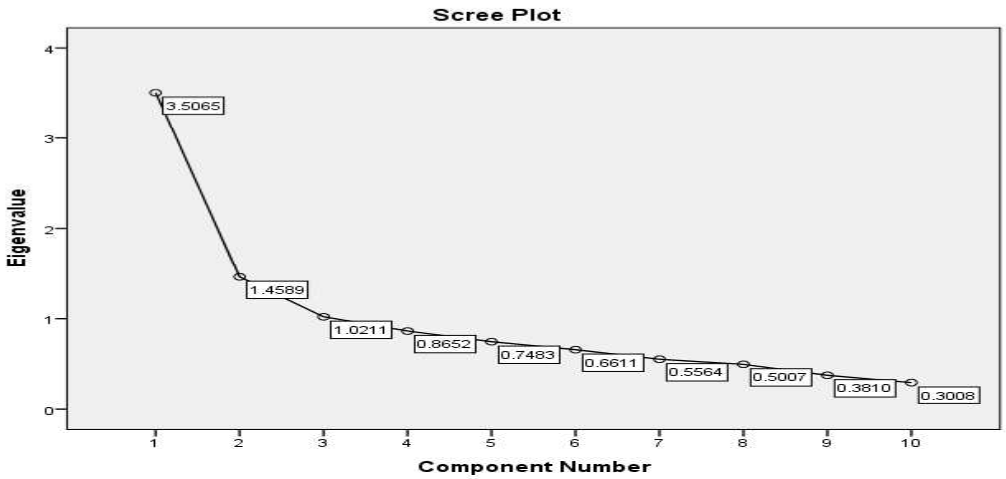


Table 51: Component Matrix for Factor Analysis

Component Matrix[a]			
	Component		
	1	2	3
EA11luxury and environmental friendliness could be combine/integrate	0.84		
EA12Customers will be ready to pay more (because of the hotel environmental sustainable practices)	0.77		
EA13By implementing environmental sustainable practices, it be possible to enchain a new type of customers	0.77		
EA10Certificated environmentally friendly hotel (eco-labeled) make a change on your hotel image	0.76		
EA1Environment helps to attract tourists to a destination	0.7		
EA5Hotels have plenty ways to sustain the natural resources if we just learn how to execute them	0.5		
EA6Hotels have right to modify the natural environment to suit their needs		0.81	
EA8Humans were meant to rule over the rest of nature		0.73	

EA4Hotels are seriously abusing the environment.			0.58
EA90If things continue on their present course, we will soon experience a major ecological disaster			0.55
Extraction Method: Principal Component Analysis.			
a. 3 components extracted.			

The idea of Rotation is to make the interpretation easier. It reduces the number of factors on which the variables under study have high loadings. The above table reported that EA11, EA12 EA10, EA13 and EA1 are loaded on factor/component 1 while EA9, EA5, EA4 are loaded on factor/component 2 and EA6 and EA8 are loaded on factor/component 3.

Based on the Rotated component matrix of three factors the variables included in each factor are stated below.

Table 52 Factor Loading

Factors	Variables	Factor Loading
Anthropocentric Attitude	EA11luxury and environmental friendliness could be combine/integrate	.827
	EA12Customers will be ready to pay more (because of the hotel environmental sustainable practices)	.805
	EA10Certificated environmentally friendly hotel (eco-labeled) make a change on your hotel image	.794
	EA13By implementing environmental sustainable practices, it be possible to enchain a new type of customers	.760
	EA1Environment helps to attract tourists to a destination	.671
Eco centric Attitudes	EA90If things continue on their present course, we will soon experience a major ecological disaster	.724
	EA4Hotels are seriously abusing the environment.	.629
	EA5Hotels have plenty ways to sustain the natural resources if we just learn how to execute them	.590
Dominant Attitudes	EA6Hotels have right to modify the natural environment to suit their needs	.783
	EA8Humans were meant to rule over the rest of nature	.782

Discussion

Anthropocentric Attitude-this factor shows the respondents' attitudes towards environment based on the material and physical benefits achieved. The people with anthropocentric attitude believe that humans exist at the center of reality. They want to sustain the environment for their self-benefits.

Eco centric Attitudes-this factor shows that respondents are giving value to environment for the sake of sustainability. Eco centric people believed that environment should be protected for the sake of its key values and not because of the material need of human beings.

Dominant Attitudes-respondents with dominant attitudes believed that humans are above the environment and they can modify the environment for the sake of getting maximum benefits.

Stage two of analysis

This study used Multiple Regression analysis to find out the relationship between managerial environmental attitude and the number of ESPs implemented in hotels. The following tables explain the results.

Model Summary is used to show overall fit statistics of regression model to the data. It shows the strength of association among the model and the dependent variables.

Table 53: Modal Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.656[a]	.431	.422	3.85054

a. Predictors: (Constant), Dominant Attitude, Eco centric Attitude, Anthropocentric Attitude

The "R" value, the multiple correlation coefficients measure the quality of prediction for the dependent variable. The high value of "R" indicates stronger relationship. Here, "R" value of 0.65 indicates moderate degree of association between managerial environmental attitude and the number of environmental sustainable practices. R Square value (also known the coefficient of determination) explains how much of variance in the dependent variable (ESPs) can be described by the independent variable (attitudes). The R Square value of 0.431 reported that managerial

environmental attitude explains 43.1% of the variability in number of environmental sustainable practices.

Table 54: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2222.141	3	740.714	49.958	.000[b]
	Residual	2935.681	198	14.827		
	Total	5157.822	201			

a. Dependent Variable: No. of Environmental Sustainable Practices
b. Predictors: (Constant), Dominant Attitude, Eco centric Attitude, Anthropocentric Attitude

In the ANOVA table, F value tests overall fit of regression model for the data. In this study the values of above table 54 shows that the managerial environmental attitude statistically significantly predicts the number of ESPs, F (3,198) = 49.958, p <0.05 therefore, regression model is a good fit of the data.

Table 55: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.970	.271		121.696	.000
	Anthropocentric Attitude	3.183	.272	.628	11.721	.000
	Eco centric Attitude	.875	.272	.173	3.221	.001
	Dominant Attitude	.396	.272	.078	1.459	.146

a. Dependent Variable: No. of Environmental Sustainable Practices

Unstandardized Coefficient table shows that how much the dependent variable(DV) varies in accordance to the independent variables (IV) if all other IV are held constant. The results of this study are as follows:

1. In the case of Anthropocentric Attitude the unstandardized coefficients (B) value is 3.183 and it is statistically significant (p<0.05). The B value indicates that with each one-unit increase in Anthropocentric Attitude, there is an increase of 3.183 units in Number of ESPs.

2. Eco centric Attitude has the unstandardized coefficients (B) value of 0.875 and it is statistically significant ($p<0.05$). The B value indicates that with each one-unit increase in Eco centric Attitude, there is an increase of 0.875 units in Number of ESPs.

3. Dominant Attitude has the unstandardized coefficients (B) value of 0.396 but it is not statistically significant ($p>0.05$). Therefore, Dominant attitude does not contribute for change in ESPs.

Multiple regression analysis revealed that independent variables (Anthropocentric Attitudes and Eco Centric Attitudes) statistically significantly predicts the implementation of ESPs, F (49.958) =, p <.05, R square =. 431.Dominant attitude statistically significantly does not predict the implementation of ESPs $p>0.05$.

4.6. Results of Analyses Related to Research Question 4: What are the motivational factors behind the implementation of ESPs?

This research explored the motivational factors that help in the implementation of ESPs, analyzing which motivational factors are most significant, i.e. which factors act as the greatest motivator in the execution of ESPs in the hotel businesses of Punjab. Previous research studies (Bohdanowicz, 2005); (Ustad, 2010); (Raderbauer, 2011) etc. have identified many motivational factors that help in the implementation of ESPs .After a through literature review,13 motivational factors have been identified for this research study that might help in the implementation of ESPs. These 13 factors have been used as scale items for the research questionnaire design (Table 56)

Table: 56 List of Potential Motivational Factors Identified from Literature Review

S.No.	Motivational Factors	References
1.	Top management support	(Ustad, 2010)
2.	Reduced operational cost	(Bohdanowicz, 2005); (Ayuso; Bohdanowicz, 2006); (Graci & Dodds, 2008); (Park, 2009); (Raderbauer, 2011); (Ustad, 2010)
3.	Legislation	(Graci & Dodds, 2008); (Kasim, 2009); (Ayuso, 2006; Mensah, 2006)
4.	Government Incentive	(Ustad, 2010)

5.	Demand of customer	(Raderbauer, 2011); (Fukey & Issac, 2014) (Bohdanowicz, 2005; 2006); (Ayuso, 2006)
6.	Personal awareness of hotel manager	(Ayuso, 2006)
7.	To save environment	(Park, 2009); (Raderbauer, 2011)
8.	An edge over competitor	(Ustad, 2010); (Graci & Dodds, 2008)
9.	Contributes to increasing market share	(Park, 2009) ; (Ustad, 2010)
10.	Improved public image	(Park, 2009) ; (Raderbauer, 2011) (Ustad, 2010); (Bohdanowicz, 2005) ; (Ayuso, 2006)
11.	Improved relation with community	(Park, 2009) ; (Raderbauer, 2011)
12.	Quality service in clean environment	(Fukey & Issac, 2014)
13.	Increased employee satisfaction	(Park, 2009); (Raderbauer, 2011); (Graci & Dodds, 2008)

Table 57: Ranking of Motivational Factors in Relation to Implementation of ESPs

	Mean	Std. Deviation	Rank	Normalized value
M Top management support	4.3812	.66035	1	1.00*
M Reduced operational cost	4.3762	.68169	2	0.99*
M Legislation	4.3317	.69389	3	0.89*
M Govt.Incentive	4.3119	.74430	4	0.84*
M Demand of customer	4.3069	.66531	5	0.83*
M Personal awareness of hotel manager	4.2178	.78041	6	0.63*
M To save environment	4.1782	.70388	7	0.54*
M An edge over competitor	4.1733	.70158	8	0.53*
M Contributes to increasing market share	4.1139	.75436	9	0.40
M Improved public image	4.1089	.72484	10	0.39
M Improved relation with community	4.0842	.68954	11	0.33
M Quality service in clean environment	3.9653	.88311	12	0.07
M Increased employee satisfaction	3.9356	.74701	13	0.00

*The normalized value shows that the motivational factor is a critical motivational factor (normalized value > or =0.50).

The Table 57 presents the result of managerial observed motivational factors that

significantly affect the implementation of ESPs in the hotel industry of Punjab. The most significant motivational factor was the support from the top management with mean valve 4.38 and SD=0.66. No respondent reported disagreement with this statement. Second most influential motivational factor was the cost reduction with mean value 4.37 and SD=0.68, followed by legislation with mean value 4.33 and SD=0.69 than government incentives with mean value 4.31 and SD=0.74 followed by demand of customer with mean value 4.30 and SD=0.66.Personal awareness of the managers have mean value of 4.21 and SD=0.78.The main component of this study that is saving of environment and edge over competitors shared the same mean value 4.17 and SD=0.70 and reported as 7th and 8th most significant motivational factor. Hoteliers did not consider rest of items as strong motivators behind the implementation of ESPS. The least important factor was increased employees' satisfaction that scored mean value 3.93 and SD=0.74. Quality service in clean environment was the second least influential motivational factor with mean value 3.96 and SD=0.88.

Kendall's W Test

Kendall's W test was applied to evaluate the tendency of agreement between the respondents. Kendall's W ranges from value 0 to value 1 where value 1 represents the complete agreement among the respondents and value 0 denotes to complete disagreement.

Table 58: Mean Ranks of Motivational Factors

	Mean Rank
M Top management support	7.96
M Reduced operational cost	7.92
M Legislation	7.69
M Demand of customer	7.59
M Govt.Incentive	7.54
M Personal awareness of hotel manager	7.19
M An edge over competitor	6.92
M To save environment	6.90
M Contributes to increasing market share	6.60
M Improved public image	6.51

M Improved relation with community	6.37
M Quality service in clean environment	6.08
M Increased employee satisfaction	5.72

Table 59: Test Statistics Kendell's W Test

N	202
Kendall's W[a]	.047
Chi-Square	113.332
Df	12
Asymp. Sig.	.000

a. Kendall's Coefficient of Concordance

The Kendall's W value 0.047 and the significance level of Kendall's W at 0.000 indicate statistically significant level of agreement between all the respondents about the motivational factors to ESPs.

4.7. Results of Analyses Related to Research Question 5: What are the barriers in implementing the ESPs in hotel industry of Punjab?

Previous studies (Levy, 2000; Tzschentke, et al., 2008; McNamara & Gibson, 2008) etc. have identified several barriers that obstruct the execution of ESPs in the hotel business. After the through literature review, 14 possible barriers to ESPs were identified for this study that are listed in Table 61. Previous studies have reported initial implementation cost, lack of awareness, high certification cost, complicated processes etc. as commonly recognized barrier in the implementation of ESPs. These studies were conducted in different geographical areas. Rowlinson (1998) has recommended using of the well-adopted factors for the research studies, as that would help the respondents to reply in more convenient way.

Table: 60 List of Potential Barriers Identified from the Literature Review

S.No.	Barrier Factors	References
1.	Initial Implementation cost	(Levy, 2000) (Tzschentke, et al., 2008); (McNamara & Gibson, 2008) (Ustad, 2010)

2.	Certification is costly	(Ustad, 2010)
3.	Complicated certification process	(Ustad, 2010)
4.	Lack of awareness of concept	(Levy, 2000); (Bohdanowicz, 2006) (McNamara & Gibson; Tzschentke, et al., 2008) (Bergin; Ustad, 2010); (Mittal & Sangwan, 2014)
5.	Weak Legislation	(Massoud, et al., 2009); (Doody, 2010); (Mittal & Sangwan, 2014)
6.	Change of routines and management style	(Ayuso, 2006)
7.	Existing non supportive structure	(McNamara & Gibson, 2008); (Ustad, 2010)
8.	Low Top Management Commitment	(Mittal & Sangwan, 2014)
9.	Little guest concern	(Hillary, 2017)
10.	Guests are uncooperative	(Kirk, 1995); (McNamara & Gibson; Tzschentke, et al., 2008)
11.	Lack of professional help	(Barnes, 2007); (Ustad, 2010); (Mittal & Sangwan, 2014)
12.	Limited green technology	(Ustad, 2010)
13.	Uncertain and/or insignificant economic advantage; slow return on investment	(Revell & Blackburn, 2007); (Ustad, 2010)
14.	Ineffective and/or non-enforcement of laws; corruption; inadequate monitoring mechanism	(Mittal & Sangwan, 2014)

Table 61: Ranking of Barriers in Relation to Implementation of ESPs

	Mean	Std. Deviation	Rank	Normalized Value
B Initial Implementation cost	4.4010	.65608	1	1.00*
B Certification is costly	4.2723	.79808	2	0.85*
B Complicated certification process	4.2574	.74183	3	0.83*
B Lack of awareness of concept	4.2426	.80147	4	0.81*
B Weak Legislation	4.1733	.81934	5	0.73*
B Change of routines and management style	4.1287	.80004	6	0.68*
B Existing non supportive structure	4.1188	.88421	7	0.67*
B Low Top Management Commitment	4.0594	.82041	8	0.60*
B Little guest concern	3.9356	.78596	9	0.45
B Guests are uncooperative	3.7970	.84841	10	0.29
B Lack of professional help	3.7525	.94533	11	0.23
B Limited green technology	3.6931	.97473	12	0.16

B Uncertain and/or insignificant economic advantage; slow return on investment	3.6931	.85510	13	0.16
B Ineffective and/or non- enforcement of laws; corruption; inadequate monitoring mechanism	3.5545	.91939	14	0.00

Those hotels that were following ESPs in operations as well as those that had yet to implement reported following significant barriers. The initial implementation cost was reported as most significant barrier with mean value 4.40 and SD=0.65 followed by cost of certification with mean value 4.27 and SD=0.79. The third most influential barrier was the complicated certification process with mean value 4.25 and SD=0.74. Lack of awareness of concept remained on 4th place with mean value 4.24 and SD=0.80. The following four barriers remained on 5th, 6th, 7th and 8th place respectively; weak legislation mean value 4.17 and SD=0.81 (place 5), change of routine and management style mean value 4.12 and SD=0.80 (place 6), exiting non supportive structure mean value 4.11 and SD=0.88 (place 7) and low top management commitment with mean value 4.05 and SD=0.82(place 8). Remaining barriers were not significantly hindering the implementation of ESPs

Kendall's W Test

Kendall's W test is applied to evaluate the tendency of agreement between the respondents. Kendall's W ranges from value 0 to value 1 where value 1 represents the complete agreement among the respondents and value 0 denotes to complete disagreement.

Table 62: Mean Ranks of Barriers

	Mean Rank
B Initial Implementation cost	9.27
B Certification is costly	8.72
B Complicated certification process	8.67
B Lack of awareness of concept	8.59
B Weak Legislation	8.24

B Existing non supportive structure	8.11
B Change of routines and management style	7.97
B Low Top Management Commitment	7.63
B Little guest concern	7.01
B Lack of professional help	6.49
B Guests are uncooperative	6.40
B Limited green technology	6.33
B Uncertain and/or insignificant economic advantage; slow return on investment	6.04
B Ineffective and/or non-enforcement of laws; corruption; inadequate monitoring mechanism	5.55

Table 63: Test Statistics

N	202
Kendall's W[a]	.101
Chi-Square	264.864
Df	13
Asymp. Sig.	.000

a. Kendall's Coefficient of Concordance

The Kendall's W value 0.101 and the significance level of Kendall's W at 0.000 indicate statistically significant agreement between respondents about the barrier factors to ESPs.

The Kendall's W test and Mean ranking of motivational factors and barriers of ESPs yielded some very interesting results in context to importance to actual adoption and execution of ESPs in the hotel businesses of Punjab. Some motivational factors and barriers were not found critical in actual implementation process of ESPs while others played vital role behind as per the reporting of respondent hoteliers.

4.8 Summary

This chapter has provided the findings of ANOVA and pairwise test of Tukey HSD to differentiate the implementation of ESPs on the basis of characteristics of respondent hotels and statistically significant difference was observed in majority of ESPs.

This chapter also provided the findings of Cluster analysis and Chi Square test that were applied to analysis the managerial environmental attitudes depending upon the characteristics of respondent hotels. Accordingly, after application of cluster analysis two clusters have been identified for managerial environmental attitude. Both the clusters were allotted with hotels having almost different characteristics and subsequently these clusters showed different attitude towards environmental issues. The results of Chi square test further revealed that managerial environmental attitudes are significantly impacted by the characteristics of the hotels.

The relationship between managerial environmental attitudes and implementation of ESPs was measured by factor analysis and multiple regression analysis. The findings of factor analysis discovered three factors from the 10 items (5 items out of total 15 items were removed because of low factor loading). The results of multiple regression found 2/3 factors statistically significant in controlling the implementation of ESPs in the hotel businesses in the research area.

The Kendall's W test and Mean ranking was applied to measure the importance of motivational factors and barriers in the actual execution of ESPs in the hotel businesses of Punjab. The results revealed that there are eighth variables of motivational and eight variables of barriers that play important role while remaining variables of motivation and barriers were not found playing significant role behind implementation of ESPs in the hotel industry of Punjab.

Chapter 5: Discussion

5.1. Introduction

The main objective of this research study was to identify the effect of managerial environmental attitude on the implementation of ESPs in the selected hotels. To achieve this objective, existing ESPs and managerial environmental attitudes were measured separately based on the characteristics of respondent hotels (number of rooms of hotel, category of hotel, type of ownership of hotel and tariff of hotel). The relationship among managerial environmental attitude and ESPs was measured by multiple regression analysis in the chapter four. This chapter includes the discussion for all the objectives, research questions and hypotheses.

Chapter is divided into following section:

- Finding of the study
- Managerial implication
- Limitation & suggestions
- Assumptions
- Conclusion.
- Summary.

5. 2. Findings of the Study

This section reports the discussion of findings in accordance to the research questions and hypotheses of this research study.

Research Question 1: What are the existing environmental sustainable practices implemented in the hotel industry of Punjab?

Research Hypotheses for Research Question One

Ho1a: There is no significant difference between environmental sustainable practices on the basis of number of rooms.

Ho1b: There is no significant difference between environmental sustainable practices on the basis of category of hotel.

Ho1c: There is no significant difference between environmental sustainable practices on the basis of type of ownership of hotel.

Ho1d: There is no significant difference between environmental sustainable practices on the basis of tariff of rooms.

The main purpose of this research question one and associated four hypotheses was to explore the current ESPs implemented in the Punjab hotel businesses depending upon the above mentioned characteristics of the hotels. The ESPs of selected hotels were measured under four dimensions;

- Energy related ESPs.
- Overall ESPs.
- Waste related ESPs.
- Water related ESPs.

The summary of findings related to above-mentioned research questions and hypotheses are presented below in table number 64.

Table: 64 Comparison of Implementation of ESPs in context to the Characteristics of Hotels

ESPs		No. of Rooms	Category of hotels	Ownership of hotels	Tariff of Hotels

	Category (C)	C1-10-25,C2-26-50,C3-51-75,C4-76-100,C5-above 100	C1-one star,C2-two star,C3-three star,C4-four star,C5-luxury hotels providing five star facilities,C6-luxury hotels providing five star deluxe facilities	C1-part of international chain or group,C2-part of local chain or group,C3-locally owned and operated	C1-1000-3000,C2-3001-5000,C3-5001-7000,C4-above 7000
Energy Related	(Most Implemented)	Energy efficient lightings (all C)	Energy efficient lightings (all C Except C6) C 6-occupancy sensor	Energy efficient lightings (all C)	Energy efficient lightings (all C)
	(Least Implemented)	C1-running laundry machines on full load C2-energy efficient laundry C3-double glazed vacuum sealed windows C4+C5- running laundry machines on full load	C1+C2+C6- running laundry machines on full load C3- energy efficient laundry C4- double glazed vacuum sealed windows C5-fans in guest room	C1-fans in guest room C2+C3- running laundry machines on full load	C1- energy efficient laundry C2- running laundry machines on full load C3+C4- running laundry machines on full load
Overall	(Most Implemented)	Environmental friendly cleaning agents(all C)	Environmental friendly cleaning agents (all C except C6) C6-no VOC paints	Environmental friendly cleaning agents(all C)	Environmental friendly cleaning agents(all C)
	(Least Implemented)	The formal environmental certification (such as ISO 14001 or EMAS or similar (all C)	The formal environmental certification (such as ISO 14001 or EMAS or similar (all C)	The formal environmental certification (such as ISO 14001 or EMAS or similar (all C)	The formal environmental certification (such as ISO 14001 or EMAS or similar (all C)
Waste Related	(Most Implemented)	C1-sewage treatment plant C2+C3-purchasing in bulk C4-sorting waste C5-laundry paper/cloth bags	C1+C2-sewage treatment plant C3+C4+C5-purchasing in bulk C6-sorting waste	C2+C3-purchasing in bulk C1-sorting waste	C1-sewage treatment plant C2-purchasing in bulk C3+C4-sorting waste
	(Least Implemented)	Refillable water flask instead of mineral water bottles (all C except C1) C1-refiilable amenities dispenser	C1-purchasing recycled goods/stationery, refillable amenities dispenser, laundry paper/cloth bags C2-refiilable amenities dispenser C3+C4+C5-Refillable water flask instead of mineral water bottles C6- donation/auction of hotel furniture	Refillable water flask instead of mineral water bottles(all C)	Refillable water flask instead of mineral water bottles (all C)
Water Related	(Most Implemented)	C1+C2+C3+C5-water efficient equipment C4-low dual/low flow flush system	C2+C3+C5+C6-water efficient equipment C1-low flow shower	C1+C3-water efficient equipment C4-low dual/low flow flush system	C1+C3+C4-water efficient equipment C4-low dual/low flow flush system

			heads C4-low dual/low flow flush system		
	(Least Implemented)	Rainwater harvesting (all C)	Rainwater harvesting (all C except C6) C6- recycled biodegradable garbage bags	Rainwater harvesting (all C)	Rainwater harvesting (all C)

Discussion of results pertaining to research hypothesis 1 $Ho1_a$, $Ho1_b$, $Ho1_c$ and $Ho1_d$: environmental sustainable practices on the basis of characteristics of hotels.

Dimension 1: Energy Related Environmental Sustainable Practices

Category 3 hotels (three star) were found least involved in installing double glazed vacuum sealed windows. The reason can be associated with the requirement of large scale infrastructural changes in the existing buildings, lack of financial resources and time involvement. McNamara & Gibson (2008) also reported, existing infrastructure and lack of time as main barrier in implementation of ESPs.

Higher categories of hotels were not actively involved in installing fans in the guest rooms. Actually, these organizations are luxurious organizations and supposed to provide value for money and that might be the reason that these hotels provide centralized air conditioning facilities without installing fans in guest rooms as this practice might be associated with the cost cutting techniques of the hotels. Hotels try to offer best hospitality and experience to their customers and avoid using the practices that might have adverse effect on the experience of the customers.

The least reporting of laundry related energy conservation techniques by the most of the hotels supposed to be linked with the fact that laundry facilities were outsourced. Hotel organizations generally outsource this service to save the cost of equipment and labor.

Use of energy efficient lighting was the most implemented practice in all categories of hotels except Category 6. Similarly some previous studies (Erdogan, 2007; Mensah, 2007; Bohdanowicz, 2006) reported that ESPs associated with direct energy

conservation are more implemented by hotels in comparison to others practices. According to a survey conducted by AH&LA in 2008 on US hotels, it was observed that more than eighty percent of hotels have adopted energy saving measurement in their operation like use of CFL and LED exit signs etc. Category 6 (luxury hotels providing five star deluxe facilities) hotels were found more involved in having occupancy sensors in guest rooms. This is an advance and expensive practice that require initial high investment. Category 6 hotels supposed to have more financial resources in comparison to other categories of hotels and therefore these organizations might afford to have occupancy sensors as most implemented energy related ESP.

However, going into deeper sights it is revealed that the implementation of energy related ESPs is more concerned with cost saving rather than environmental sustainability.

Tukey's HSD pairwise significance tests with $p<0.05$ denotes significant difference in ESPs reported that characteristics of the hotels like number of rooms; category; type of ownerships and tariff plans have significant effect at the implementation of energy related ESPs in the Punjab hotel businesses. Most of the variables related to energy showed the effect of characteristics of hotels on actual implementation. However, ES 15 (Using energy efficient lighting) does not have impact of any characteristics of the hotels on actual implementation similarly ES23 (Conducting an energy audit) have not shown impact of characteristics of the hotels on actual implementation expect in the case of number of rooms of hotels.

Dimension 2: Overall Environmental Sustainable Practices

The least implemented environmental management practice was having a formal environmental accreditation like LEED or ISO 14001 etc. in all the respondent hotels. According to (Fukey & Issac, 2014) some hotels find certification fee too high for getting eco certification. Massoud, et al. (2009) in their case study of Lebanon, reported that hotels do not go for green certification as this is not a legal requirement to run the business. In this research study also, the same barriers supposed to play influential role in not getting formal green certification.

The most implemented overall ESP was the usage of environmental friendly/green cleaning agents in all the hotels irrespective of characteristics. Similarly in the study of (Mensah I. , 2006) on US hotels, 72% respondent hotels were found using the environmental friendly cleaning agents.

Tukey's HSD pairwise significance tests with $p<0.05$ denotes significant difference in ESPs reported that characteristics of the hotels like number of rooms; category; type of ownerships and tariff plans have significant effect at the application of overall ESPs in the Punjab hotel businesses. All the variables related to overall ESPs showed the effect of characteristics of hotels on actual implementation.

Dimension 3: Waste Related Environmental Sustainable Practices

Using of refillable water flask instead of mineral water bottle was found commonly least reported practice in all the hotels of different characteristics while it is one of the most economical and easy to implement waste management practice that can reduce a large quantity of waste arising from plastic water bottles. The implementation of this practice can reduce the significant amount of adverse impact on environment associated with hotel businesses. Again the non-implementation of this practice is supposed to be associated with lack of cooperation from the customers as they think this practice is cutting down their comfort and convenience during their stay in hotels. The other least implemented waste related practice includes the use of refillable amenities dispenser, purchasing of recycled goods and use of cloth/paper bags for laundry and the reasons may be associated with the higher initial purchasing cost as use of cloth/paper bags for laundry was found most implemented in higher category of hotels that have more financial resources.

The most implemented waste related ESP was the sewage treatment plant, purchasing goods in bulk and sorting of waste according to type. Purchasing goods in bulk may be associated with saving of purchasing cost and purchasing time while other two practices, sewage treatment plant and sorting of waste according to type may be the result of legislation and regulatory actions. According to (Erdogan N. , 2007) hotels' waste management practices are also affected by legislation and regulatory actions of nations and regions. In consistent, the studies of different regions reported different

rate of involvement in waste management practices for example (Bohdanowicz P. , 2006) in her study on European hotels found that more than eighty percent of hotels were involved in waste management practices while (Mensah I. , 2006) in his study at Accra region found this involvement only seventeen percent.

Tukey's HSD pairwise significance tests with $p<0.05$ denotes significant difference in ESPs and confirms that characteristics of the hotels like number of rooms; category; type of ownerships and tariff plans have significant impact at the implementation of waste related ESPs in the Punjab hotel businesses. Most of the variables related to waste showed the effect of characteristics of hotels on actual implementation.

However, ES13 (Sewage treatment plant) has not been effected by the category of hotel; tariff of hotels and kind of ownership of hotel and was only effected by the number of rooms available with the respondent hotels.

ES31 (Purchasing goods in bulk) has no impact of the category of hotel and kind of ownership of hotel and was effected by the number of rooms of hotels and tariff of hotels only.

ES 12 **(**Refillable thermos flasks instead of mineral water bottles) has no impact of the number of rooms of hotels on actual implementation.

However, ES3 (Donation/sale of leftover food to local organizations) and ES37 (Recycled Biodegradable Garbage Bags) have no effect of tariff of hotels on overall implementation.

Dimension 4: Water Related Environmental Sustainable Practices

All the respondent hotels with different characteristics were found least involved in implementing rain water harvesting in their concerned organizations. The reason behind the low implementation of this variable can be associated with the age of respondent hotels. The rain water harvesting is relatively new concept that gained popularity in recent time and 65.85 percent respondent hotels in this study were more than 6 years old and their infrastructure was not build to fit this variable. McNamara

& Gibson (2008) also reported in their study that present infrastructure and age of the building are frequently nominated barriers in the implementation of ESPs.

The most implemented ESP in all the respondent hotels was the water efficient equipment followed by low flow or dual flush toilets. Mensah I. (2006) conducted a study in Greater Accra region about environmental sustainable practices and found that 67 percent of respondent hotels were involved in usage of water saving equipment as this practice also leads to cost saving benefit.

Tukey's HSD pairwise significance tests with $p<0.05$ denotes significant difference in ESPs and reported that characteristics of the hotels like number of rooms; category; type of ownerships and tariff plans significantly impact the implementation of water related ESPs in the Punjab hotel businesses. All the variables related to water showed the effect of characteristics of hotels on actual implementation.

In conclusion, it is found that the various characteristics of the hotel industry like number of rooms, category of hotels, type of ownership of the hotels, tariff of hotel have significantly large effect on the implementation of all dimensions of ESPs in the respondent hotels in Punjab. Smaller/independent/lower category of hotels with lesser tariff rates showed the less involvement in all ESPs' initiatives than larger/chain/higher category of hotels with higher tariff rates. ESPs like wind power energy, solar energy, grey water treatment, key card control energy supply, occupancy sensors in guest rooms, green certification are highly implemented by large hotels but found less practiced by small hotel properties. These practices related to ESPs need huge initial financial investment and the introduction of ESPs that need availability of financial resources, additional space and infrastructure changes are rarely implemented in the smaller hotel industry of Punjab. Consistent to these findings, AH&LA 2008 conducted study on US hotels found that major barriers behind implementation of ESPs are lack of financial resources and the question on return on investment.

The results of this research study are supported by the reporting of (Gil, et al., 2001; McNamara & Gibson, 2008) that associated the size of the company to greater

availability of resources and superior visibility. These studies supported the theory of larger companies being more pro-environmentalist.

The findings of this study about higher category of hotels with more pro-environmental initiatives are in harmony with the earlier research findings of (Gil, et al., 2001; Rivera, 2002).These previous studies also associated higher category of hotels with larger volume of assets and employees and hence more ability to adopt ESPs in daily operations.

Previous studies also reported that international chain hotels and local chain hotels are more expected to adopt ESPs because of marketing experience of green properties, and easy sharing of environmental knowledge between associates than independent hotels (Ayuso, 2006; Bohdanowicz, 2006; Rahman, et al., 2012).In contrast independent hotels generally expresses the lack of knowledge regarding the ongoing green practices of other hotels, the process of accreditation, technical knowledge of application of green practices etc. and requires the help of professional to fulfill this deficiency. According to (Rahman, et al., 2012) in independent hotels, owner or manger has freedom to works as per their own will. Therefore, the environmental actions depend upon the manager's attitude, knowledge and readiness to take action.

The findings of this study indicate the implementation ESPs in the hotel of Punjab is a voluntary initiative of hoteliers that can be associated with cost reduction and profit generations. The observations of this study are also in harmony with the results of the earlier studies where financial gains were reported as significant factors behind the implementation of ESPs in the hotels (Bohdanowicz, 2005; Park, 2009; Fukey & Issac, 2014).

There is absence of formally green certified hotel in the state. The reason behind might be linked with the lack of positive managerial environmental attitude, high certification cost and complicated process. Hotels that follow the formal certification from the agencies generally raise their tariff and other rates to meet the expenses incurred on the certification process. This may improve the revenue per customers but overall sales go down as majority of customers do not like to additional money for the initiatives of green practices of hotels (Brown, 1996; Houdré, 2008).

Most of the customers expect to receive luxurious and comfortable services at hotels like, centralized air conditioning, fresh and crisp linen and towels every day, right to use to swimming pools and spas, high flow shower heads etc. Any restriction on these services thought to be as a compromise to services, and hotels hesitate to introduce such practices that are associated with the risk of losing customers.

The findings of the study are vital and provide significant view of the environmental sustainability of the study area. The study of ESPs in the survey state Punjab is one of the vital and strategic finding, which demonstrate the intention of hoteliers regarding implementing ESPs in daily operations. The research scholars and academicians have not studied the type of ESPs prevalent in the hotels of the state. This study has gone further by not measuring the ESPs only but also the rate of difference of same ESPs based on the characteristics of the hotels. This study may be treated as primary step to explore the environmental sustainable actions of classified hotel businesses in the state. This research study tried to clear the research gap on the concept of ESPs in the region.

Research Question 2: What is the attitude of managers towards environmental sustainable practices?

Research Hypotheses for Research Question Two

Ho2a: There is no significant difference between managerial environmental attitude on the basis of number of rooms.

Ho2b: There is no significant difference between managerial environmental attitude on the basis of category of hotel.

Ho2c: There is no significant difference between managerial environmental attitude on the basis of type of ownership of hotel.

Ho2d: There is no significant difference between managerial environmental attitude on the basis of tariff of rooms.

This research study applied the scale of 15 items to measure the environmental attitudes of hotel managers. Most of the items for this scale were taken from NEP

scale (Dunlap, 2008) with minor amendment to make it suitable for the hotel industry. Managers of respondent hotels reported a strong commitment towards most of statements that measured various aspects towards environment.

The managerial responses towards environment were tested in two phases.

Step 1

In the first phase two-step cluster analysis was used followed by cross tabulation of clusters with various variables to prepare the profile of responses. In the second phase the hypotheses framed were tested using chi-square test.

All the responses were classified into two clusters. There were 111 numbers of cases in cluster 1 and 91 numbers of cases in cluster 2.

Cluster 1 contains majorly small hotels having less than 50 rooms. These hotels were mostly independent units, owned and operated locally and having category of one star, two star and three star grades. This cluster comprises all the 87 respondent hotels (100%) having tariff between 1000-3000.

Cluster 2 comprises majorly large hotels having more than 50 rooms. These hotels were part of International chain or local chain of hotels. Mostly all higher category hotels fall under this cluster. This cluster comprises all the hotels (100%) having tariff above 7000 and most of the hotels between tariff range of 3001-7000.

The characteristics of respondents of both the clusters were as follows;

The respondents of cluster one is found with less positive pro-environmental attitudes in comparison to cluster two respondents. Respondent of this cluster reported less response towards getting green certification, benefits of going green, negative impact of hotel industry on environment, following the law of nature etc. (table 41).

The respondents of cluster two is found having more positive pro-environmental attitudes in comparison to the respondents of cluster one. The following 12 variables out of total 15 variables as mentioned in table 41 received more positive response from the respondents of cluster two in comparison to respondents of cluster one;

EA1, EA2, EA3, EA4, EA5, EA9, EA10, EA11, EA12, EA13, EA14, EA15.

The variables EA6, EA7, EA8 of environmental attitude received almost equal response (table 41 where mean value almost same for both the clusters) from all the respondents of both the clusters.

Step 2

Chi square test was applied to find out the possible difference between the environmental attitudes of managers based on the different characteristics of the hotels. The correlation among two variables is found to be statistically significant if Asymptotic Significance (2-sided) or p value < 0.05 and this stage support the rejection of null hypothesis. The result analysis reported a significant difference between the managerial environmental attitudes based on the characteristics of hotels.

Ho2a

More number of rooms denotes the larger hotel business. Such hotels have more employees to deal with the work and generate more revenue for the business as rooms once build can be sold again and again with little expenses of maintenance. The large hotels are supposed to have more professional staff with more pro-environmental attitude. Number of rooms of a hotel expected to positively affect managerial environmental attitude since it generally reflects increase in environmental attitude of employees. The findings of this study revealed the more optimistic environmental attitudes in the managers of large hotels business in comparison to small hotels having lesser rooms. These findings are supported by previous research study of (Deng, et al., 1992) that explored the resistance of small hotels to adopt ESPs. Mensah & Blankson (2014) also found more environmental commitment in the managers of large hotels because of availability of well-defined corporate environmental policy, environmental action plans and eco labelling and green accreditation.

In this study, the outcomes of Chi-square test with probability value 0.000 revealed the statistically significant difference in managerial environmental attitudes based on the number of rooms/size of the hotels. Thus, Null hypothesis was rejected based on of above mentioned results.

Ho2b

The star classification of hotels is designed as a sign of luxury service to the guests. The higher classified hotels are supposed to meet the changing customer needs and market competition more effectively in comparison to hotels with lower classified hotels. Higher classified hotels generally have more competent and professional staff that is supposed to be familiar with current ongoing environmental sustainability concept of hospitality industry. In this study, findings revealed that managers of higher category of hotels possess more positive environmental attitudes. The findings are supported by the previous studies of (Mensah & Blankson, 2014; Tsai, 2014) which explored higher managerial pro-environmental attitude in higher category of hotels.

In this study, the outcomes of Chi-square analysis with probability value 0.000 revealed the statistically significant variance in managerial environmental attitudes founded on the category of the hotels. Thus, Null hypothesis was rejected based on of above mentioned results.

Ho2c

In this study type of ownership of hotels includes International chains or groups; National/local chain or group and independent hotels that are locally owned and operated. It is supposed that chain hotels share latest information or knowledge more easily in the form of corporate policies as compared to independently owned properties. The proper information about the concept helps to develop more positive attitude too. The outcome of this study reported the more positive environmental attitude in the hotel managers of International chains or groups; National/local chain or group in comparison to managers of independent locally owned hotel properties.

The findings of this research study are in harmony with the results of (Bohdanowicz, 2005) that explored the more positive environmental attitude in the managers of chain affiliated hotels in comparison to independent hotels.

The outcomes of Chi-square test with probability value 0.000 revealed the statistically significant difference in managerial environmental attitudes based on the type of

ownership of the hotels. Thus, Null hypothesis was rejected based on the above mentioned results.

Ho2d

More tariffs mean the more revenue to business. Implementation of ESPs requires huge initial financial investment. Managers of the organizations which have sufficient financial resources available thought to have more positive environmental attitudes as they need not to worry about the implementation of actual environmental sustainable initiatives. The findings of this study also reported the more positive environmental attitudes in the hotels having higher tariff plans in comparison to hotels with lower tariff plans. The results are in consistent with the earlier research studies of (Doody; Ustad, 2010; Chen, et al., 2011) that revealed shortage of funds as main barriers in the implementation of ESPs and reported more positive environmental attitude in financially stable people.

In this study, the outcomes of Chi-square test with probability value of 0.000 revealed the statistically significant variance in managerial environmental attitudes based on the tariff of the hotels. Thus, Null hypothesis was rejected based on the above-mentioned results.

Summarizing the findings of difference in managerial environmental attitudes based on the various characteristics of the hotels, statistically significant variances were found in the managerial environmental attitudes. Managers that belong to large and higher category of hotels and part of international or local chains with higher tariff plans are found to have more positive environmental attitudes in comparison to small, locally owned one star, two star and three star hotels having lower tariff plans. Actually, large or chain hotels generally operate under corporate policies and such organizations respond more quickly to the changing trends of the market and always found ready to adapt the new policies to meet the competitive market. Managers of such organizations reported more optimistic environmental attitudes.

Consistent to the findings of this study (Saenyanupap, 2011) also reported in her study that the hoteliers' environmental attitude basically depends upon the type of hotel, year of establishment of hotel, type of ownership etc.

This is again a very key finding as there is absolute lack of studies that have explored the hoteliers' environmental attitudes in the context to survey state Punjab. Till date academicians and research scholars have not studied this aspect in relation to Punjab region. This study has filled this gap by not studying only the managerial environmental attitude but also studying the effect of characteristics of hotels on the environmental attitudes held by the managers. The findings of this study have been supported with the results of previous studies (Bohdanowicz, 2005; Saenyanupap, 2011; Dief & Font, 2012; Rowe, 2018).

Research Question 3-Is there any relationship between managerial environmental attitude and the number of environmental sustainable practices implemented in their hotels?

This study assessed the managerial environmental attitudes; favorable or unfavorable towards the environment issues as well as about the hotels' contribution towards maintaining environmental sustainability.

Ho3: There is no significant relationship between managerial environmental attitude and the number of environmental sustainable practices implemented in the hotels

This hypothesis was evaluated in two steps; in the first step factor analysis was used to make the factors of the responses related to environmental attitude of hotel managers followed by rotated component matrix to make the interpretation easier. Finally, the hypothesis framed was tested using regression test to find out the association between managerial environmental attitude and the number of ESPs in the respondent hotels.

Factor analysis found three factors out of 10 items of the construct of managerial environmental attitude (5 items were removed due to less value of factor loadings).

These three factors were named as follows;

Factor 1-Anthropocentric Attitude

This factor shows the respondents' attitudes towards environment in context to the material and physical benefits achieved from the environment. The people with anthropocentric attitude believe that humans exist at the center of reality. They want to sustain the environment for their self-benefits.

Factor 2-Eco centric Attitude

This factor shows that respondents are giving value to environment for the sake of sustainability. Eco centric people believed that environment should be protected for the sake of its key values and not because of the fulfillment of material need of human beings.

Factor 3-Dominant Attitude

Respondents with dominant attitudes believed that humans are above the environment and they can modify the environment for the sake of getting maximum benefits.

In the second step, the relationship between managerial environmental attitude and the number of ESPs implemented in the hotels was analyzed by application of multiple regressions whereas above mentioned three factors acted as predictors and ESPs as dependent variables.

"R" value (Table 53) of 0.656 indicates moderate degree of association between managerial environmental attitude and the number of ESPs. R Square value of 0.431 indicates that managerial environmental attitude explain 43.1% of the variability in number of ESPs.

The ANOVA F value (Table 54) shows that the managerial environmental attitude statistically significantly predicts the number of ESPs, $F(3,198) = 49.958$, $p < 0.05$ indicate that regression model is a good fit of the data.

The interpretation of Coefficient table 55 revealed that Anthropocentric Attitude and Eco centric Attitude significantly contribute in the implementation of ESPs of sample

hotels; (B) value is 3.183 and 0.875 respectively. Both factor of attitude have statistically significant p value <0.05.These results are in harmony to the theories of (Gladwin, et al.; Starik & Rands, 1995) who emphasized the importance of managers' having eco centric values that helped their organizations to implement sustainability.

However, Dominant attitude does not contribute for change in ESPs and are not statistically significant (p>0.05).

The result indicates the significate positive relationship between the managerial environmental attitude and number of environmental sustainable implemented in their concerned hotels. The hotels, where managers were having more pro-environmental attitudes are found with the more implementation of ESPs in operation in comparison to the hotels where managers reported comparatively less positive environmental attitudes.

However, this significant relationship can work more effectively for the hotels' involvement in pro-environmental actions based on the support from top management, availability of financial resources, government support etc. The results of this research study are in harmony with the reporting of previous studies

Research Question 4 - What are the pushing factors behind the implementation of environmental sustainable practices?

In this research study, it was observed that different respondents reported different reasons or motivational factors for the adoption and implementation of ESPs in their concerned organizations. The results of this study explored following eight (8/13) significant variables of motivation that help in the growth of environmental sustainable initiatives in the studied area.

1. Top management Support

This was the most mentioned factor by the respondents in the hotel industry of Punjab. Most of the hotels in this region belong to small and medium category with limited financial resources. In such category of hotels decision making and introduction of any new policy is very much dependent on the discretion of owners or

top most managers of the firm. In consistent to the result of this study, (Banerjee, et al., 2003) in their study found that top management's commitments towards environment has positive association with the environmental policy and strategy of the concerned firm. Environmental management system is largely effected by means of environmental perspective of managers. It is concluded that information, strategy and policy making in relation to environmental sustainability should start from top for effective adoption and implementation of the concept (Kirk, 1995; Ayuso, 2006).

2. Reduced Operational Cost

It was the second most observed motivational factor in the perspective of hotel managers of this study area. In consistent to the findings of this study (Bohdanowicz, 2005; 2006) in her study on European hotels also reported reduction of operational cost most influential factor behind the implementation of environmental protection programs. Sloan, et al. (2005) in their study among the Germany hotels found that cost control programs were mostly associated with water conservation, energy management and waste management. This factor is particularly significant for the hotels that functions in a terrific market of competition and facing the increased costs of water, energy and waste disposals. As the hotels belongs to commercial sectors and works for the profit earnings, it was expected that cost reduction would remain in as one of the major motivational factor.

3. Legislation

This factor remained at number three as per the responses of hotel managers. In India, there is lack of strict environmental regulation in comparison to other countries. Many previous researches have reported strict government legislation as one of the most important motivational factors that determines the hoteliers' intention to adopt and execute the environmental protection actions (Tzschentke, et al., 2004) . Other countries like UAE and Austria has made it essential to get green accreditation if a business wants to get start its operation in these countries. In consistent to the results of this study (Quazi, 2001) reported that government statements about cleaner environment build pressures on businesses to consider environmental issues before taking decisions. Chan & Wong (2006) reported that in China, if an industry is found

to violate the environmental regulation, government regulatory bodies penalized such industries with heavy penalties. Therefore, it is concluded that government legislation can play a vital role in pressurizing or encouraging the hotels to accept and implement the ESPs and to cut their negative effect on the environment. In India also government should come up strict regulation regarding to environment protection and should make the green accreditation necessary for all the industries.

4. Government Incentive

Most of the respondent managers reported the government incentive as a vital motivational factor to promote the concept of environmental sustainability in the area. As green certification is a complicated and costly affair, the government's incentives in association with this concept can encourage the hoteliers to get the green accreditation for their concerned organization (Kasim, 2009). In consistent to the finding of this study (Chan & Wong, 2006) in his study found that the government of Singapore provides 70% contribution in the initial cost of getting the green certification like ISO 14001 to the companies that is going to execute the environmental management system in their organizations. In addition to this Malaysia is also offering subsidies to such industries who implement environmental protection actions in operations. Ann, et al. (2006) found same type of incentive scheme in Taiwan also, where government is encouraging and helping the small and medium enterprises to go green by providing the 40-60% of the initial cost of getting the green certification to 50 organizations annually.

5. Demand of Customer

This factor does not get the expected response from the respondent managers, the reason behind may be associated that these managers did not receive such demand by the customers in the region of Punjab. Customers in the study area are not adequately aware about the environmental issues and green practices of other hotels of the India. In contrast to this study, (Bohdanowicz, 2005; 2006) in her study reported demand of customers as second most influential motivational factor in association with improved public image. In developed counties like Europe and USA, customers are aware about the environmental issues, demand, and choose hotels with environmental sustainable

actions. Céspedes-Lorente (2003) conducted their study on Spanish hotel industry to explore the stakeholders' environmental influence and found that some customers are ready to spend additional money for the environmental initiatives of hotels.

6. Personal Awareness of the Hotel Managers

Knowledge level of concerned managers has been reported as significant influential factor behind the implementation of ESPs in the hotel organizations. According to (Chan, 2014; Wan, 2017) environmental knowledge/awareness have positive relation to ecological behavior. The lack of awareness about the sustainability concept may impact the overall working of environmental management system. In consistent to the result of this research study, (Ayuso, 2006) in her study of hotels in Spain found that lack of knowledge of the green concept among the sample hotels was the main reason behind the low involvement of hoteliers in pro-environmental activities.

7. To Save the Environment

Motivational factor "to save the environment" received average response from the managers of Punjab hotel industry. The reason behind may be associated with the perception that currently implemented ESPs are more related to financial gains than saving or preserving the environment.

8. An Edge over Competitors

The factor "an edge over competitors" did not receive much attention by the respondents in the Punjab region. In consistent to the results of this study, (Sloan, et al., 2005) also did not find competitive edge as an important motivational factor in their study of German hotels. In contrast (Ustad, 2010) conducted his research study in New Zealand to explore the environmental management system of hotels and reported this factor as third most important influential factor in the acceptance and execution of environmental management system in the hotel organizations. The reason behind non-reporting of this factor in the context of this study area may be

linked to the non -practicing of ESPs by the hotels in the area and subsequently lacking of knowledge about the competitive advantage of this concept.

In summary, it is stated that one of the objective of this research study was to explore the motivational factors that can help in the growth of sustainability concept among the hotel industry of Punjab. To achieve this objective 13 variables for measuring the barriers were identified with the help of deep review of literature. The result analysis reported that 8 out of 13 motivational factors were critical for the smooth adoption and effective application of ESPs in the hotel organizations of Punjab. The eight critical factors comprised of top management support, reduced costs, government legislation, and government's incentive, demand of customers, and personal awareness of the managers, to save the environment and an edge over competitors.
However, the motivational factors such as contributes to increased market share, improved public image, improved relation with community, quality service in clean environment and increased employee satisfaction were not reported as significant motivational factors by the respondents of Punjab hotel industry.

Research Question 5 - What are the barriers in implementing the environmental sustainable practices in hotel industry of Punjab?

The results of this study explored following eight (8/14) significant variables of barrier that are hindering the growth of environmental sustainable initiatives in the studied area.

1. Initial Implementation Cost

The result of this study reported the initial high implementation cost as most influential barrier behind implementation of ESPs. According to (Ann, et al., 2006) the implementation cost incudes documentation completion, process of modification, adoption and implementation of concept, hiring of professional staff, training of existing staff, procuring of related computer soft wares etc. It is difficult to go green without a sound financial foundation. Thus, the initial implementation cost was ranked among the top eight barriers.

Consistent to this study, (Rowe, 2018) also reported high implementation cost as significant barrier in his study. But it is necessary to estimate the initial cost of implementation of ESPs against the tangible and intangible payback of the future.

Chan (2008) as cited by (Calvache & Evra, 2008) in study of barriers reported the opinion of hoteliers about the cost related to greening the organizations as follows:

- "it is too expensive to install energy and water efficient equipment"
- "our financial resources have significant influence on the type and scale of pro ecological initiatives undertaken"
- "Pro ecological initiatives are too expensive, although profitable in the long run. That is in well-organized countries there are special finance schemes available, such as grant, loans, tax reductions, and other economic incentives. These are obviously economic aspects that play decisive roles in the decision making process concerning environmental oriented solutions."

The adoption and implementation of ESPs was found to be associated with the availability of financial resources. According to previous studies as discussed in earlier chapters, the infrastructure cost goes up by 10 to 15 %, if building is to be made green to meet the accreditation guidelines of certifying agencies.

The above findings indicate that there are significant costs associated with start-up as well as maintenance of Environmental Management System (EMS) and this is the most significant barrier behind the application process. To overcome this barrier, financial institutions and banks should provide easy and flexible grants and loans for implementing sustainable technologies in the business. In Hong Kong for example, the banks are providing easy loans for the development of green projects (Gou, et al., 2013).

2. Certification is Costly

The certification cost is found second most influential barrier by the managerial responses. The respondents were guided to mark the answers on Likert scale and majority of respondent agreed that getting the green accreditation certificate is a costly affair. In consistent to the observations of this study, (Ayuso, 2006) in her study stated that different green certifying agencies have different process and fee for

getting the accreditation and there is lack of standardized process. In addition to this recertifying is also very costly and some certifications need to renewed every year. In conclusion it is found that getting the green certification is a costly affair and even the renew cost is significantly high that is beyond the limit of medium and small organizations. In Punjab, most of the hotels are under the category of medium and small businesses and facing the lack of financial resources in context of getting the green certification.

3. Complicated Certification Process

In this study, the third most reported barrier was complicated process of getting the certification. The green concept is a continuous process that needs regular management and evaluation in relation to be effective implementation and actual environmental sustainability at the destination. The research studies of (Chan & Wong, 2006; Ann, et al., 2006) stated five basic principles for the effective implementation of ESPs in the organization; (1) commitment towards environment and policy formulation (2) planning the environmental actions (3) adoption and practicing of environmental actions (4) evaluation and correction of action (5) management review. All the above-mentioned principles require lots of paperwork, time devotion and commitment of top management for effective working. Thus, it is concluded that getting the certification and maintaining its effective working is a complicated and difficult process that require extra time devotion of management and other concerned staff and making it difficult to adopt and implement in addition to routine working.

4. Lack of Awareness of the Concept

According to the result of this study, less awareness of green concept and the benefits associated with the implementation was the fourth most reported barrier in the survey state Punjab. In consistent to this result, (Chan, 2008) in his study found lack of knowledge of green concept as third most reported barrier. Chan, et al. (2017) found the significance of this barrier in construction industries also. As the concept of environmental sustainability is at growing stage in India, most of the hotels managers reported lack of knowledge of the concept.

Educating customers and industry people about the benefits of implementing ESPs in business would help to boost the acceptance and actual execution of environmental sustainability in the hotels of Punjab. For achieving this purpose there is requirement of new research studies that can establish the benefits of environmental sustainability or the present studies could be employed for the same purpose.

5. Weak Legislation

In this study weak legislation is found to hinder the implementation of ESPs. The findings reported that hotel managers observe weak legislation an important barrier behind the implementation of ESPs. Most of the respondents reported that hotel businesses do not take environmental sustainable initiatives because the lack of environmental legislation and regular environmental inspection by the government agencies. This observation is in accordance to the results of (Mittal & Sangwan, 2014) who reported the weak legislation as most important barrier behind the implementation of ESPs. According to (Chan, et al., 2018) the hotel businesses would meet the terms, if expectations regarding environmental sustainability are well defined in the form of legislation requirement. In developing nations like India where environmental sustainability is new concept, it is usually anticipated that businesses and people hesitate to accept the concept without the legislation in place.

The findings suggest that Government agencies through legislation and power to pressurize the hotels to implement the ESPs can stimulate the environmental decisions of organizations. Hotel businesses that show lacking in the effective implementation of ESPs should be suitability punished by imposing penalties for the same.

6. Change of Routine and Management Style

Another significant barrier behind ESPs implementation is resistance to change of deep-rooted old-style routine and management. This barrier is found to have close association with other barriers like initial implementation cost, the lack of awareness of the concept, lack of professional experts etc. In context to this study, this factor is considered as critical (not the utmost critical) barrier. This factor received the average response from managers, and the reason may be associated with the fact that

respondents were not willing to accept this factor to be associated with them. Majority of the hotel managers work in conventional ways and are not comfortable in changing their way of working. Moreover, hotel industry is completely a commercial sector and managers are paid to earn profits for the organizations. Therefore, managers do not propose such changes to top management that require huge investments and change in conventional routine work. Harich (2010) also stated in his study that change resistant is a significant barrier in environmental sustainability process.

7. Existing Non Supportive Structure

This factor received average response, neither too high nor very less by the respondent managers. The implementation of environmental sustainable actions requires many infrastructural alterations in the existing buildings like installation of water and energy conservation fixtures and equipment, solar energy system, rain water harvesting, installation of vacuum sealed double glazed window etc. These infrastructure changes are also associated with significant expenses. In this study 13 percent of sample hotel properties were more than fifteen years old with conventional infrastructure features. The reason of average response for this barrier might be the lack of awareness in the respondents about the infrastructure changes required to introduce the ESPs in the organization.

8. Low Top Management Commitment

The factor "low top management commitment" received average response by the managers of respondent hotels. Respondents do not feel that top management is less devoted towards the adoption of ESPs in the organization. The slow progress of the green hotels may be linked to non-popularity of the concept in the region rather than associating it with low support of top management.

To sum up, it is stated that the acceptance and implementation of ESPs in the hotel organizations has gained high level of attention at International level. However, the adoption of this concept in Asian countries like India is still at beginnings stages and facing many barriers. These barriers should be overcome to boost the growth of environmental sustainability concept in the hotel industries. Barriers behind the

implementation of ESPs have not been studied by research scholars in context to hotels of Punjab state. This research study was an attempt to identify the reasons which are hindering the acceptance and actual implementation of sustainability concept in the region. To meet this objective 14 variables of barriers were selected with the support of thorough review of literature. The study applied survey method to collect the overall 202 responses. The findings reported that 8 out of 14 barriers were significantly hindering the acceptance and execution process of ESPs in the Punjab hotel businesses. The most significant barriers were identified as Initial implementation cost, cost of certification, complicated certification process, lack of awareness of the concept, weak legislation, change of routine and management style, existing non-supportive structure and low top management commitment towards the concept.

However, the rest of barriers such as little guest concern; guests are un-cooperative; lack of professional help; limited green technology; uncertain and/or insignificant economic advantage; slow return on investment; ineffective and/or non-enforcement of laws/ corruption/ inadequate monitoring mechanism were not found significant in hindering the implementation of ESPs.

This research study should be seen as primary step in exploring the observed barriers behind implementation process of ESPs in the Punjab hotel industry. The results of the study not only help in filling the research gap by identifying the barriers behind the implementation of ESPs in the developing countries, but also offer valued foundation for policy makers and stakeholders to take suitable actions to mitigate the barriers related to implementation of ESPs and subsequently promoting the environmental sustainability concept in the Punjab hotel businesses.

5.3 Managerial Implications of the Study

This section provides both theoretical and managerial suggestions that are derived from the results of this study. This research study was performed among hotel industry of Punjab and explored the existing situation of implementation of ESPs in the region and the difference of rate of implementation in relation to the managerial

environmental attitudes. The managerial observed barriers and motivational factors behind the implementation of ESPs were also investigated.

Over the last couple of years, researchers and mass communication mediums have stressed on the economic importance of tourism industry giving less importance to the negative impact of this industry. Having realized the adverse impact of hotel industry on environment, during the last decade some of large hotel businesses in India have achieved best green accreditations for their hotels. Besides being working for the sustainability of environment, these hotels have gained an edge over the competitors. The promotion and valuation of these hotels have touched the sky in few years. This highlights a vital implication for managers and hotels that ESPs are not only to sustain the environment but also brings financial gains to business. This study supports the pro-environmental actions of hotels and point out the fact that hotels which adopt green actions in operations have potentials for positive image in community with additional advantage of financial gains.

This study provides managers the much needed information regarding the prevailing green concept across the hotel industry on Global and National level and the level of current ESPs present in the survey state Punjab. This information will help them to anticipate the need and benefits associated with implementation of pro-environmental action in the organizations.

One of the other very vital implications for managers from this study is the role that top managers can play in the acceptance and execution of ESPs in the organization. The result analyses are consistent to the results of earlier research studies that reported the involvement of top management for the effective implementation of environmental sustainable action of firms. This study observed that managerial environmental attitudes play significant part in the rate of implementation of ESPs in the hotel businesses. The policies and strategies implemented from top get best response in association with effective implementation and control methods. Irrespective of the type and level of change, the top management needs to take an active part to introduce a change in an organization.

One of the other key implications for managers from this study is that hotels need to start with small environmental sustainable initiatives subsequently increasing to big initiatives that require huge investments. These small initiatives can do wonders for the surrounding environment without worrying about the initial investments.

This study highlights that hotel managers should monitor the negative effect of their organizations on the destination environment in addition the economic profits of organization because in today's cut throat competition it is necessary to build a positive image among the society to achieve the extra niche in the market. Managers should keep in pace with the Government regulations, changing trends of other hotels and customer needs. The monitoring of latest actions of other hotels would enable the organization to align with the changing trends and to be ready according to the changing demand of customers. Such managers can attract early bird benefits to the organization.

The study also highlights that although adopting and implementing formal environmental sustainable initiatives require high initial investment but some environmental sustainable actions can be implemented with limited available finances that subsequently bring noticeable reduced negative impact on environment.

5.4. Limitation and Suggestions of the Study

This primary study was the original effort to identify the managerial attitude towards environmental issues and ESPs and to measure the association between the exiting managerial environmental attitude and actual application of ESPs in the hotel organizations of Punjab, India. It was difficult to evaluate this study against other similar studies of the same area.

Managers hesitate to answer the questions regarding number of ESPs implemented in their hotel because of secrecy of their actions. This study collected responses of the hotel managers and other senior executives of Punjab only and results are concerned with this region only. Results may vary according to different regions. Future studies could be conducted in wider geographical area including two or more states to find

out the role of geographical locations on the attitudes of managers. This study targeted senior managers and head of departments to measure the attitude of hoteliers towards environmental sustainable initiatives. Top managers were chosen intentionally as they have influential role in strategy decision and policy making in the organization.

This research has established basic information about the ESPs and managerial environmental attitude among the hoteliers in Punjab region of India. Future researchers are suggested to investigate the other factors of ESPs as well because there are several areas that need to be studied further such as:

1. As Punjab hotel industry consist of mainly small hotels having less than 50 rooms, a study may be conducted to investigate the reaction of small hotels in response to growing pressure from customers and stakeholders for pro-environmental actions to save the environment.

2. This research has explored some common ESPs related to energy saving, water conservation, waste controlling and overall ESPs, implemented by the hotel industry of Punjab. These practices are associated with cost saving also. An advance study may be conducted to identify the annual financial savings in association of application of these practices.

3. The findings of this study reported that effective implementation of ESPs requires huge initial investment, time and resources but in the long run by means of cost savings provides significant financial benefits to the organization. It is recommended to collect quantitative data by survey methods to analysis the comparison of cost and financial benefits about the implementation of ESPs.

4. A survey of relationship of environmental education and environmental training with the environmental attitudes needs to be done to determine if these factors influence the attitude of managers.

5. This research study is mainly concentrated on four dimensions of ESPs: energy management; water management; waste controlling techniques and overall ESPs while other ESPs like green building design; green purchasing etc. are beyond the

scope of this study. Further researches are suggested with the incorporation of more dimensions of ESPs.

6. It is also necessary to analysis other industries similarly to help the state to sustain the natural assets and environment for the upcoming generations.

5.5. Assumptions

This study includes many assumptions. Simon & Goes (2013) defined assumption as factors that influence the study, but researcher cannot prove these factors after the completion of study. The first assumption was made that responses would represent the actual image of environmental attitude of respondents and environmental actions. Participants were assumed to meet the criteria of study.

Secondly, it was assumed that measurement scale was reliable and the research questions would provide the all-necessary information related to objective of the study. I also assumed that the data analysis method adopted for this study would provide the reliable and easy to understand results.

It was assumed that the respondents represent the whole hotel industry of Punjab and the responses might prove real across different states.

These assumptions were essential as the researcher could not justify the issues that arise based on participants' responses.

5.6. Conclusions

This section provides the summary of thesis and conclusion drawn from it. This study has adopted the descriptive and relationship approach to find out the environmental sustainable actions of the hotel businesses of Punjab. Previously, there were no research studies that explored the association among the environmental attitudes of managers and the actual implementation of ESPs in the hotel industry of Punjab. In addition to this, researchers and academicians rarely studied the barriers and motivational factors from the perspective of hotel managers in this region. The aim of this research study was to collect the responses from large number of hotels through

the Punjab state and to present the broader view of the rate of implementation of ESPs in the region, along with exploring the relationship of rate of difference of implementation of ESPs with the managerial environmental attitude. The conclusion of this study is presented in the five parts:

(1) The existing situation of ESPs in the hotel businesses of Punjab;

(2) Managerial environmental attitudes in the respondent hotels;

(3) The relationship of managerial environmental attitudes with the rate of difference of implementation of ESPs;

(4) Managerial observed barrier;

(5) Managerial observed motivational factors.

(1) The existing situation of ESPs in the hotel businesses of Punjab

It was found that almost no hotel in Punjab has formal green accreditation certificate, yet many hotels have practically implemented few ESPs in their concerned hotels**.** Responses of survey reported that managers perceived the environment issues as important and are conscious about the harmful effect of hotels on surrounding environment. Hoteliers were having certain level of environmental knowledge and they reported awareness about the basic steps that can preserve and sustain the environment. Most participated areas of ESPs were energy saving, water conservation and waste controlling techniques as these practices are associated with cost saving also. Rainwater harvesting and solar energy are adopted by some large organizations only because of the need of initial requirement of space and finances.

The implementation of ESPs is not common across the entire hotel business in the region. The reason behind the difference of rate of implementation is linked to the characteristics of the hotel organizations. The forerunners are those in integrated chain, larger/higher classified hotels with more tariff rates. The smaller hotels are generally found with less awareness about the practices of other green hotels and benefits associated with it. Most of the hotels in the region are small having less than 50 rooms and limited financial resources. The implementation of ESPs is associated

with huge initial cost with unattractive benefits and these small hotels are unable to bear the initial implementation investments and green certification cost.

The results of this study suggest for incorporating more ESPs in all types of hotels in Punjab, as it is most needed at present time to deal with the environmental problems of the region. Sustaining high quality of environment should be the priority of every hotel organization irrespective of size of property, type of ownership, clientele and tariff.

(2) Managerial environmental attitudes in the respondent hotels

Managers were having good intention towards sustainability of environment. However, a significant variance in managerial environmental attitude was noticed among the hotels of different characteristics. In smaller and independent organizations, the implementation of ESPs is dependent upon the willingness of manager/owner, whereas in larger/higher classified or chain hotels the decision relating to implementation of ESPs is generally taken at corporate level. The availability of formal environmental policy and required information of the green concept develops more positive environmental attitudes in the managers of larger/higher classified or chain hotels.

The current study found that even the managers possess positive attitude towards environment issue, the lack of knowledge of environmental sustainability/green concept is there. The environmental knowledge among Punjab hoteliers is not up to the required level to introduce the environmental sustainable concept in the organization. Most of the managers are not aware about green practices of other hotels. To attain noticeable positive improvement in environmental sustainability, managers need positive environmental attitude, knowledge of the concept, financial resources and reorganization from the senior management as well as from the local government.

(3) The relationship of managerial environmental attitudes with the rate of difference of implementation of ESPs

This research study was aimed to identify the relationship of managerial environmental attitude and implementation of ESPs in the respondent hotels. As hypothesized in chapter three, the results found the significant relationship between these two constructs. Hotels, in which managers or other executives conveyed more positive environmental attitude, were found with the more implementation of ESPs in the organizations. In other words, managers with positive anthropocentric attitude and eco-centric attitudes can influence the environmental policies and outcomes in the organizations.

As managers play an influential role in policy making and decision implementation, it is important for concerned authorities, who want to promote the environmental sustainability concept among hotel industry to understand the influence of managerial attitude on actual implementation of ESPs.

(4) Managerial observed barrier

The rate of adoption and implementation of ESPs is not at par with the expectations. In spite of growing popularity of this concept, managerial positive environmental attitude and many associated benefits some hotels are doubtful in adopting ESPs in their organizations. The reason is associated with the less awareness about the concept of ESPs. In addition, there is lack of public policy or legislation that can encourage the green technology in the hotel industry of Punjab. Public policy and legislations has great role in diffusion of ESPs in any industry by means of proper implementation and regular checks.

Green accreditation and implementation of ESPs is associated with high initial cost. Smaller and medium hotels find it difficult to meet this expenditure. It is recommended for hotels to start with small initiatives like putting separate bins for different wastes censor lighting in rooms, washing of linen at guest wish that requires negligible investment but contribute greatly to save environment. Government should also provide financial help and subsidies to hotels that are facing difficulty in managing the initial implementation cost of ESPs. Government is not offering any subsidies, tax exemption or incentives for the hotels' pro-environmental initiatives as offered in other countries like Singapore, Thailand etc.

The lack of formal environmental policy is main hurdle between good intention and actual implementation in hotel organizations. Most of the respondent hotels reported the lack of written policies regarding implementation of ESPs, which is again the result of the lack of proper knowledge of green concept in the top authorities. It is recommended that hotel managers should stress on written environmental policy in the organization to provide guidance to employees regarding taking steps to stop the negative impact of hotels on society. There should be an environmental audit to evaluate the initiatives under the umbrella of ESPs.

Stakeholders, NGOs, sector associations and government should work in close coordination for the dissemination of information and development of new economical environmental sustainable technologies.

In the conclusion it is summed up that the barriers reported by the managers actually play significant role behind the implementation process of ESPs in the study area.

(5) Managerial observed motivational factors

The relationship among the hotel businesses and the sustainability of environment has been influenced by different factors. Despite being saving the environment, there are many market related motivations for the hotels to go green. The findings of this study revealed most influential motivational factors as top management support, reduced operational cost and legislation. The least influential motivational factors were reported as increased employees' satisfaction, quality service in clean environment and improved relation with community.

The results revealed that until now there is no pressure from guest or employees to implement the ESPs in the Punjab hotel industry. However, personal beliefs about sustaining the environment and cost saving were observed as the main motivators for Punjab hotel managers.

5.7 Summary

To sum up, it is reported from the observed data that most adopted ESPs are those that require low implementation cost and bring financial benefits to organization. Higher

implementation rates are noted for water saving and energy-saving techniques. The practices that require high implementation cost or structural changes like wind power, solar energy and rainwater harvesting are less common in spite of being associated with high financial benefits in future. However, respondents were found hesitating in implementing some practices that may hinder the experience of customers like towel and linen reuse program, using of refillable flask instead of mineral water bottles etc.

The role of Government is found most significant in the effective implementation and growth of ESPs in the hotel organizations. Based on the observations of this research study, some recommendations are proposed on part of government's involvement to improve the overall implementation of the ESPs in the hotel industry of Punjab:

(1) The government should make some environmental practices mandatory for the hotel organizations to get the approval of the project from the state government.
(2) The government should make the regular check on environmental initiatives; any defaulter should be penalized heavily.
(3) The government should contribute some amount for the initial implementation of ESPs.
(4) The organizations with pro- environmental actions should be rewarded by means of subsidies, incentives, tax rebates etc.
(5) The government, NGOs and hospitality organizations should organize the environmental awareness campaigns to educate the industry about environmental issues and the benefits of incorporating environmental initiatives in operations.
(6) The government should work to provide green technology, green certification and professional help in cost effective and easy to approach manner.

Green programs and ESPs of hotels can work, as great marketing tool. The sustainability should depend upon the shared responsibility between the government and the industry. Maintaining sustainability is a continuous process and does not end with the construction of green building. The further process involves equipping this green building with sustainable material and technologies and monitoring the process on continuous basis. Monitoring is extremely important to maintain the effective

implementation of any policy. The cooperation and knowledge sharing between the different categories and sizes of hotels may also boost the overall adoption and implementation of this concept.

The researcher would expect for more involvement of Punjab hoteliers in formal green certification especially of International level like LEED and ISO 14001 as these certificates would provide more reorganization at worldwide level and better competitive advantage too. These certifying agencies can help the concerned organizations to develop professional training modules for the staff and guests, an effective monitoring system for the evaluation of environmental initiatives by means of developing formal strategies, policies and procedures.

The findings of the study also suggest developing the formal environmental management program with professional staff and consultants to solve the environmental matters in more effective manner on continuous basis.

References

Abaeian, V., Yeoh, K. & Khong, K., 2014. An exploration of CSR initiatives undertaken by Malaysian hotels: Underlying motivations from a managerial perspective. *Procedia-Social and Behavioral Sciences,* Volume 144, pp. 423-432.

Accomodation Times, 2018. *Accommodation Times News Service.* [Online]
Available at: https://accommodationtimes.com/punjab-aims-tourism-industry-contributes-20-to-punjabs-gdp/
[Accessed 15 April 2019].

Aggarwal, N., 2015. Green Practices In the Hospitality Industry:Case Study of Dehradun and Mussoorie3(18), pp.230-240.. *Scholary Research Journal for Interdisciplinary Studies,* 3(18), pp. 230-239.

Ajzen, I. & Fishbein, M., 2000. Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European review of social psychology,* 11(1), pp. 1-33.

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(4) Managerial observed barrier;

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(1) The existing situation of ESPs in the hotel businesses of Punjab

It was found that almost no hotel in Punjab has formal green accreditation certificate, yet many hotels have practically implemented few ESPs in their concerned hotels**.** Responses of survey reported that managers perceived the environment issues as important and are conscious about the harmful effect of hotels on surrounding environment. Hoteliers were having certain level of environmental knowledge and they reported awareness about the basic steps that can preserve and sustain the environment. Most participated areas of ESPs were energy saving, water conservation and waste controlling techniques as these practices are associated with cost saving also. Rainwater harvesting and solar energy are adopted by some large organizations only because of the need of initial requirement of space and finances.

The implementation of ESPs is not common across the entire hotel business in the region. The reason behind the difference of rate of implementation is linked to the characteristics of the hotel organizations. The forerunners are those in integrated chain, larger/higher classified hotels with more tariff rates. The smaller hotels are generally found with less awareness about the practices of other green hotels and benefits associated with it. Most of the hotels in the region are small having less than 50 rooms and limited financial resources. The implementation of ESPs is associated

with huge initial cost with unattractive benefits and these small hotels are unable to bear the initial implementation investments and green certification cost.

The results of this study suggest for incorporating more ESPs in all types of hotels in Punjab, as it is most needed at present time to deal with the environmental problems of the region. Sustaining high quality of environment should be the priority of every hotel organization irrespective of size of property, type of ownership, clientele and tariff.

(2) Managerial environmental attitudes in the respondent hotels

Managers were having good intention towards sustainability of environment. However, a significant variance in managerial environmental attitude was noticed among the hotels of different characteristics. In smaller and independent organizations, the implementation of ESPs is dependent upon the willingness of manager/owner, whereas in larger/higher classified or chain hotels the decision relating to implementation of ESPs is generally taken at corporate level. The availability of formal environmental policy and required information of the green concept develops more positive environmental attitudes in the managers of larger/higher classified or chain hotels.

The current study found that even the managers possess positive attitude towards environment issue, the lack of knowledge of environmental sustainability/green concept is there. The environmental knowledge among Punjab hoteliers is not up to the required level to introduce the environmental sustainable concept in the organization. Most of the managers are not aware about green practices of other hotels. To attain noticeable positive improvement in environmental sustainability, managers need positive environmental attitude, knowledge of the concept, financial resources and reorganization from the senior management as well as from the local government.

(3) The relationship of managerial environmental attitudes with the rate of difference of implementation of ESPs

This research study was aimed to identify the relationship of managerial environmental attitude and implementation of ESPs in the respondent hotels. As hypothesized in chapter three, the results found the significant relationship between these two constructs. Hotels, in which managers or other executives conveyed more positive environmental attitude, were found with the more implementation of ESPs in the organizations. In other words, managers with positive anthropocentric attitude and eco-centric attitudes can influence the environmental policies and outcomes in the organizations.

As managers play an influential role in policy making and decision implementation, it is important for concerned authorities, who want to promote the environmental sustainability concept among hotel industry to understand the influence of managerial attitude on actual implementation of ESPs.

(4) Managerial observed barrier

The rate of adoption and implementation of ESPs is not at par with the expectations. In spite of growing popularity of this concept, managerial positive environmental attitude and many associated benefits some hotels are doubtful in adopting ESPs in their organizations. The reason is associated with the less awareness about the concept of ESPs. In addition, there is lack of public policy or legislation that can encourage the green technology in the hotel industry of Punjab. Public policy and legislations has great role in diffusion of ESPs in any industry by means of proper implementation and regular checks.

Green accreditation and implementation of ESPs is associated with high initial cost. Smaller and medium hotels find it difficult to meet this expenditure. It is recommended for hotels to start with small initiatives like putting separate bins for different wastes censor lighting in rooms, washing of linen at guest wish that requires negligible investment but contribute greatly to save environment. Government should also provide financial help and subsidies to hotels that are facing difficulty in managing the initial implementation cost of ESPs. Government is not offering any subsidies, tax exemption or incentives for the hotels' pro-environmental initiatives as offered in other countries like Singapore, Thailand etc.

The lack of formal environmental policy is main hurdle between good intention and actual implementation in hotel organizations. Most of the respondent hotels reported the lack of written policies regarding implementation of ESPs, which is again the result of the lack of proper knowledge of green concept in the top authorities. It is recommended that hotel managers should stress on written environmental policy in the organization to provide guidance to employees regarding taking steps to stop the negative impact of hotels on society. There should be an environmental audit to evaluate the initiatives under the umbrella of ESPs.

Stakeholders, NGOs, sector associations and government should work in close coordination for the dissemination of information and development of new economical environmental sustainable technologies.

In the conclusion it is summed up that the barriers reported by the managers actually play significant role behind the implementation process of ESPs in the study area.

(5) Managerial observed motivational factors

The relationship among the hotel businesses and the sustainability of environment has been influenced by different factors. Despite being saving the environment, there are many market related motivations for the hotels to go green. The findings of this study revealed most influential motivational factors as top management support, reduced operational cost and legislation. The least influential motivational factors were reported as increased employees' satisfaction, quality service in clean environment and improved relation with community.

The results revealed that until now there is no pressure from guest or employees to implement the ESPs in the Punjab hotel industry. However, personal beliefs about sustaining the environment and cost saving were observed as the main motivators for Punjab hotel managers.

5.7 Summary

To sum up, it is reported from the observed data that most adopted ESPs are those that require low implementation cost and bring financial benefits to organization. Higher

implementation rates are noted for water saving and energy-saving techniques. The practices that require high implementation cost or structural changes like wind power, solar energy and rainwater harvesting are less common in spite of being associated with high financial benefits in future. However, respondents were found hesitating in implementing some practices that may hinder the experience of customers like towel and linen reuse program, using of refillable flask instead of mineral water bottles etc.

The role of Government is found most significant in the effective implementation and growth of ESPs in the hotel organizations. Based on the observations of this research study, some recommendations are proposed on part of government's involvement to improve the overall implementation of the ESPs in the hotel industry of Punjab:

(1) The government should make some environmental practices mandatory for the hotel organizations to get the approval of the project from the state government.
(2) The government should make the regular check on environmental initiatives; any defaulter should be penalized heavily.
(3) The government should contribute some amount for the initial implementation of ESPs.
(4) The organizations with pro- environmental actions should be rewarded by means of subsidies, incentives, tax rebates etc.
(5) The government, NGOs and hospitality organizations should organize the environmental awareness campaigns to educate the industry about environmental issues and the benefits of incorporating environmental initiatives in operations.
(6) The government should work to provide green technology, green certification and professional help in cost effective and easy to approach manner.

Green programs and ESPs of hotels can work, as great marketing tool. The sustainability should depend upon the shared responsibility between the government and the industry. Maintaining sustainability is a continuous process and does not end with the construction of green building. The further process involves equipping this green building with sustainable material and technologies and monitoring the process on continuous basis. Monitoring is extremely important to maintain the effective

implementation of any policy. The cooperation and knowledge sharing between the different categories and sizes of hotels may also boost the overall adoption and implementation of this concept.

The researcher would expect for more involvement of Punjab hoteliers in formal green certification especially of International level like LEED and ISO 14001 as these certificates would provide more reorganization at worldwide level and better competitive advantage too. These certifying agencies can help the concerned organizations to develop professional training modules for the staff and guests, an effective monitoring system for the evaluation of environmental initiatives by means of developing formal strategies, policies and procedures.

The findings of the study also suggest developing the formal environmental management program with professional staff and consultants to solve the environmental matters in more effective manner on continuous basis.

References

Abaeian, V., Yeoh, K. & Khong, K., 2014. An exploration of CSR initiatives undertaken by Malaysian hotels: Underlying motivations from a managerial perspective. *Procedia-Social and Behavioral Sciences,* Volume 144, pp. 423-432.

Accomodation Times, 2018. *Accommodation Times News Service.* [Online]
Available at: https://accommodationtimes.com/punjab-aims-tourism-industry-contributes-20-to-punjabs-gdp/
[Accessed 15 April 2019].

Aggarwal, N., 2015. Green Practices In the Hospitality Industry:Case Study of Dehradun and Mussoorie3(18), pp.230-240.. *Scholary Research Journal for Interdisciplinary Studies,* 3(18), pp. 230-239.

Ajzen, I. & Fishbein, M., 2000. Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European review of social psychology,* 11(1), pp. 1-33.

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References

Abaeian, V., Yeoh, K. & Khong, K., 2014. An exploration of CSR initiatives undertaken by Malaysian hotels: Underlying motivations from a managerial perspective. *Procedia-Social and Behavioral Sciences,* Volume 144, pp. 423-432.

Accomodation Times, 2018. *Accommodation Times News Service.* [Online]
Available at: https://accommodationtimes.com/punjab-aims-tourism-industry-contributes-20-to-punjabs-gdp/
[Accessed 15 April 2019].

Aggarwal, N., 2015. Green Practices In the Hospitality Industry:Case Study of Dehradun and Mussoorie3(18), pp.230-240.. *Scholary Research Journal for Interdisciplinary Studies,* 3(18), pp. 230-239.

Ajzen, I. & Fishbein, M., 2000. Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European review of social psychology,* 11(1), pp. 1-33.

Alexander, S. & Kennedy, C., 2002. Green hotels: Opportunities and resources for success. *Zero Waste Alliance,* 5(7), pp. 1-9.

Anderson, L. & Bateman, T., 2000. Individual environmental initiative: championing natural environmental issues in U.S. business organizations. *Academy of Management Journal,* 43(4), pp. 548-570.

Andrikopoulos, A. & Kriklani, N., 2013. Environmental disclosure and financial characteristics of the firm: The case of Denmark. *Corporate Social Responsibility and Environmental Management,* 20(1), pp. 55-64.

Anglada, M. L., 2000. Small and medium-sized enterprises' perceptions of the environment: A study from Spain. Small and Medium-Sized Enterprises and the Environment. *Sheffield: Greenleaf Publishing,* pp. 62-74.

Ann, G., Zailani, S. & Wahid, N., 2006. A study on the impact of environmental management system (EMS) certification towards firms' performance in Malaysia. *Management of Environmental Quality: An International Journal,* 17(1), pp. 73-93.

Assael, H. & Keon, J., 1982. Nonsampling vs. sampling errors in survey research. *Journal of Marketing,* 46(2), pp. 114-123.

Ayuso, S., 2006. Adoption of voluntary environmental tools for sustainable tourism: analysing the experience of Spanish hotels. *Corporate Social Responsibility and Environmental Management,* 13(4), pp. 207-220.

Bader, E., 2005. Sustainable hotel business practices. *Journal of Retail and Leisure Property,* 5(1), pp. 70-77.

Baker, M., Davis, E. & Weaver, P., 2014. Eco-friendly attitudes, barriers to participation, and differences in behavior at green hotels. *Cornell Hospitality Quarterly,* 55(1), pp. 89-99.

Banerjee, A. & Chaudhury, S., 2010. Statistics without tears: Populations and samples. *Industrial psychiatry journal,* 19(1), p. 60.

Banerjee, S., 2001. Corporate environmental strategies and actions. *Management Decision,* 39(1), pp. 36-46.

Banerjee, S., 2002. Corporate environmentalism: the construct and its measurement. *Journal of Business Research,* 55(3), pp. 177-191.

Banerjee, S., Iyer, E. & Kashyap, R., 2003. Corporate environmentalism: Antecedents and influence of industry type. *Journal of Marketing,* 67(2), pp. 106-122.

Bansal, P. & Roth, K., 2000. Why companies go green: A model of ecological responsiveness. *Academy of Management Journal,* 43(4), pp. 717-736.

Barker, J., 1996. Can you believe the “Eco” label. *In Successful Meetings,* 45(2), pp. 32-33.

Barnes, F., 2007. A sustainable future starts in the present. *Caterer and Hotelkeeper,* 197(4495), p. 37.

Barsky, J., 2008. Understand importance of green to guests. *Hotel and Motel Management,* 223(17), p. 10.

Bartlett, A. A., 1994. Reflections on sustainability, population growth, and the environment. Population and Environment. *Population & Environment,* 16(1), pp. 5-35.

Baumast, A., 1997. *Environmental Management in Europe:Result of the European Barometer,* St. Gallen, Switzerland: University of St. Gallen .

Becken, S., Frampton, C. & Simmons, D., 2001. Energy consumption patterns in the accommodation sector—the New Zealand case. *Ecological Economics,* 39(3), pp. 371-386.

Bergin, M., 2010. Manage your environmental costs. In: *Hotel & Catering Review.* s.l.:s.n., pp. 33-35.

Best, J. & Kahn, J., 2009. *Research in Education.* 9th ed. Chicago: Pearson Education Inc..

Best, M. & Thapa, B., 2013. Motives, facilitators and constraints of environmental management in the Caribbean accommodations sector. *Journal of Cleaner Production,* Volume 52, pp. 165-175.

Bhatt, B. & Kaur, M., 2015. Green management in Hotel Industry-A Case Study of Chandigarh Hotels. *Gian Jyoti E-Journal,* Jul-Sep, 5(3), pp. 58-70.

Blake, J., 2007. Hotels that Blaze a Green Trail. *Caterer and Hotel keeper,* Volume 10, p. 52.

Bohdanowicz, P. & Zientara, P., 2008. Corporate social responsibility in hospitality: Issues and implications. A case study of Scandic. *Scandinavian Journal of Hospitality and Tourism,* 8(4), pp. 271-293.

Bohdanowicz, P., 2005. European hoteliers’ environmental attitudes: Greening the business. *Cornell hotel and restaurant administration quarterly,* 46(2), pp. 188-204.

Bohdanowicz, P., 2006. Environmental awareness and initiatives in the Swedish and Polish hotel industries—survey results. *International Journal of Hospitality Management,* 25(4), pp. 662-682.

Bohdanowicz, P., 2006. *Responsible resource management in hotels: attitudes, indicators, tools and strategie,* KTH, Stockholm: Doctoral dissertation, KTH.

Bohdanowicz, P. & Martinac, 2003. *Attitudes towards sustainability in chain hotels–Results of a European survey.* s.l., diva-portal.org.

Bohdanowicz, P. & Martinac, I., 2007. Determinants and benchmarking of resource consumption in hotels—Case study of Hilton International and Scandic in Europe. *Energy and buildings,* 39(1), pp. 82-95.

Brodsky, S., 2005. Water conservation crucial to energy savings. *Hotel & Motel Management,,* 220(13).

Brown, B., Hanson, M., Liverman, D. & Merideth, R., 1987. Global sustainability: toward definition. *Environmental management,* 11(6), pp. 713-719.

Brown, M., 1996. Environmental Policy in the hotel;"green"strategy or stratagem?. *International Journal of Contemporary Management,* 8(3), pp. 18-23.

Bryman, A., 2016. *Social research methods.* 5th ed. Oxford: Oxford university press..

BusinessDictionary, 2018. *green business.* [Online]
Available at: http://www.businessdictionary.com/definition/green-business.html
[Accessed 22 May 2018].

BusinessDictionary, n.d. *BusinessDictionary.com.* [Online]
Available at: http://www.businessdictionary.com/definition/environmental-sustainability.html
[Accessed 3 November 2019].

Butler, J., 2008. The compelling “hard case” for “green” hotel development. *Cornell hospitality quarterly,* 49(3), pp. 234-244..

Buysse, K. & Verbeke, A., 2003. Proactive environmental strategies: A stakeholder management perspective. *Strategic management journal,* 24(5), pp. 453-470.

Calvache, B. & Evra, M., 2008. *Green hotels in Sweden,* s.l.: s.n.

Cárdenas, D., Byrd, E. & Duffy, L., 2015. An exploratory study of community awareness of impacts and agreement to sustainable tourism development principles. *Tourism and Hospitality Research,* 15(4), pp. 254-266.

Carmona-Moreno, E., Céspedes-Lorente, J. & De Burgos-Jimenez, J., 2004. Environmental strategies in Spanish hotels: contextual factors and performance. *The Service Industries Journal,* 24(3), pp. 101-130.

Carter, L. & Schooler, K., 1949. Value, need, and other factors in perception. *Psychological Review,* 56(4), p. 200.

Castelló, I. & Lozano, J., 2011. Searching for new forms of legitimacy through corporate responsibility rhetoric. *Journal of Business Ethics,* 100(1), pp. 11-29.

Cennamo, C., Berrone, P. & i Gomez-Mejia, L., 2009. Does stakeholder management have a dark side?. *Journal of Business Ethics,* 89(4), pp. 491-507.

Central Pollution Control Board, 2000. *Environmental Standards for Ambient Air,Automobiles,Fuels,Industries and Noise.* New delhi: Central Pollution Control Board, Ministry of Environment & Forests, Government of India.

Céspedes-Lorente, J., de Burgos-Jiménez, J. & Alvarez-Gil, M., 2003. Stakeholders' environmental influence. An empirical analysis in the Spanish hotel industry. *Scandinavian Journal of Management,* 19(3), pp. 333-358.

Chaba, A., 2013. *...but, 'statistics' show power-starved Punjab yet to exploit renewable energy sources.* [Online]
Available at: http://archive.indianexpress.com/news/...but--statistics--show-powerstarved-punjab-yet-to-exploit-renewable-energy-sources/1172570/
[Accessed 8 September 2019].

Chakraborty, V., 2018. *Indian Society Blog.* [Online]
Available at: https://www.mapsofindia.com/my-india/society/environment-protection-act-1986-protecting-indias-environment
[Accessed 13 October 2019].

Chan, A., Darko, A., Olanipekun, A. & Ameyaw, E., 2018. Critical barriers to green building technologies adoption in developing countries: The case of Ghana. *Journal of cleaner production,* Volume 172, pp. 1067-1079.

Chan, E., 2008. Barriers to EMS in the hotel industry. *International Journal of Hospitality Management,* 27(2), pp. 187-196.

Chan, E. a. H. R., 2010. Attitude towards EMSs in an international hotel: An exploratory case study. *International Journal of Hospitality Management,* 29(4), pp. 641-651.

Chan, E., Hon, A., Chan, W. & Okumus, F., 2014. What drives employees' intentions to implement green practices in hotels? The role of knowledge, awareness, concern and ecological behaviour. *International Journal of Hospitality Management,* Volume 40, pp. 20-28.

Chan, E. S. H. A. H. C. W. &. O. F., 2014. What drives employees' intentions to implement green practices in hotels?. *International Journal of Hospitality Management,* pp. 20-28.

Chan, E. & Wong, S., 2006. Motivations for ISO 14001 in the hotel industry. *Tourism Management,* 27(3), pp. 481-492.

Chan, W. & Ho, K., 2006. Hotels's environmental management system(ISO14001):creative financing strategy. *journal of Business Ethics,* 18(4), pp. 307-319.

Chan, W. et al., 2008. Enegy Saving and Tourism Sustainibilty:Solar Control Window Film in Hotel Rooms. *Journal of Sustainability in tourism,* 16(5), pp. 563-574.

Chen, X. et al., 2011. Effects of attitudinal and sociodemographic factors on pro-environmental behaviour in urban China. *Environmental Conservation,* 38(1), pp. 45-52.

Chen, Y. & Chen, Y., 2012. The Advantage of Green management for Hotel Competitiveness in Taiwan. *Journal of Management and Sustainability,* Volume 2, p. 211.

Chen, Y. & Chen, Y., 2012. The advantages of green management for hotel competitiveness in Taiwan: in the viewpoint of senior hotel managers. *Journal of management and sustainability,* Volume 2, p. 211.

Chiranjeevi, K., 2013. *FHRAI Magazine.* [Online]
Available at: https://issuu.com/ashishcb/docs/fhrai_october_13
[Accessed 15 May 2019].

Chong, W., Wong, K. & Io, J., 2009. Hong Kong Hotels Sewage:Environmental Cost and Saving Techniques. *Journal of Hospitality &Tourism Research,* 33(3), pp. 329-346.

Chou, C., 2014. Hotels' environmental policies and employee personal environmental beliefs: Interactions and outcomes. *Tourism Management,* Volume 40, pp. 436-446.

Christmann, P. & Taylor, G., 2001. Globalization and the environment: Determinants of firm self-regulation in China. *Journal of international business studies,* 32(3), pp. 439-458.

Churchill Jr, G., 1979. A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research,* 16(1), pp. 64-73.

Claver-Cortés, E., Molina-Azorin, J., Pereira-Moliner, J. & Lopez-Gamero, M., 2007. Environmental strategies and their impact on hotel performance. *Journal of Sustainable Tourism,* 15(6), pp. 663-679.

Clayton, S. D., 2012. *The Oxford handbook of environmental and conservation psychology.* Oxford: Oxford University Press.

Clem, W., 2009. *Things You Need to Know About Going Green.* [Online]
Available at: http://www. greencar. com/articles/5-things-need-going-green. php
[Accessed 12 October 2019].

Concept Hospitality, n.d. *Concept Hospitality.* [Online]
Available at: http://www.concepthospitality.com/consultant/ecotel_certification.htm
[Accessed 2019 October 2019].

Cook, R., Hsu, C. & Marqua, J., 2017. *Tourism: The business of hospitality and travel.* 6th ed. s.l.:Pearson.

Cordano, M. & Frieze, I., 2000. Pollution reduction preferences of US environmental managers: Applying Ajzen's theory of planned behavior. *Academy of Management journal,* 43(3), pp. 627-641.

Costanza, R. & Patteb, B., 1995. Defining and predicting sustainability. *Ecological Economics,* 15(3), pp. 193-196.

Council, I. G. B., 2014. *Indian Green Building Council.* [Online]
Available at: https://igbc.in/igbc/redirectHtml.htm?redVal=showLeednosign
[Accessed 10 March 2018].

CRGGS, 2015. *Climate Resilient Green Growth Strategies for Punjab (Summary for Policy Makers).* [Online]
Available at: https://www.teriin.org/projects/green/pdf/Punjab_SPM.pdf
[Accessed 10 AUGUST 2018].

Dascalaki, E. & Balaras, C., 2004. XENIOS—a methodology for assessing refurbishment scenarios and the potential of application of RES and RUE in hotels. *Energy and Buildings,* 36(11), pp. 1091-1105.

Del Brio, J., Fernández, E., Junquera, B. & Vázquez, C., 2001. Motivations for adopting the ISO 14001 standard: a study of Spanish industrial companies. *Environmental Quality Management,* 10(4), pp. 13-28.

Delener, 1995. An integrative review of nonresponse errors in survey research: Major influences and strategies. *Research in Marketing,* Volume 12, pp. 49-80.

Deng, S., Ryan, C. & Moutinho, L., 1992. Canadian hoteliers and their attitudes towards environmental issues. *International Journal of Hospitality Management,,* August, 11(3), pp. 225-237.

Dernbach, J. & Mintz, J., 2011. Environmental laws and sustainability: An introduction. *Sustainability,* 3(3), pp. 531-540.

Dewhurst, H. & Thomas, R., 2003. Encouraging sustainable business practices in a non-regulatory environment: A case study of small tourism firms in a UK national park. *Journal of Sustainable Tourism,* 11(5), pp. 383-403.

Dief, M. & Font, X., 2012. Determinants of environmental management in the Red Sea hotels: Personal and organizational values and contextual variables. *Journal of Hospitality & Tourism Research,,* 36(1), pp. 115-137.

Dillman, D. A., 1972. Increasing mail questionnaire response in large samples of the general public. *The Public Opinion Quarterly,* 36(2), pp. 254-257.

Doody, H., 2010. *What are the barriers to implementing environmental practices in the Irish hospitality industry.* Ireland, THRIC.

Dunlap, R. E., 2008. The new environmental paradigm scale: From marginality to worldwide use. *Journal of environmental Education ,* 40(1), pp. 3-18.

Dunning, J., 1995. Reappraising the Eclectic Paradigm in an Age of Alliance Capitalism. *Journal of International Business Studies,* pp. 111-142.

Dyllick, T. & Hockerts, K., 2002. Beyond the business case for corporate sustainability. *Business Strategy and the Environment,* 11(2), pp. 130-141.

Economic & Statistical Organization Goverment, P., 2019. *Economic & Statistical Organization Goverment of Punjab.* [Online]
Available at: http://www.esopb.gov.in/
[Accessed 12 June 2019].

Environmental, U. N. E. P. &. I. H. &. R. A., 2005. *Environmental Good Practice In Hotels: Case Studies from the International Hotel & Restaurant Association Environmental Award.* [Online]
Available at: http://hdl.handle.net/20.500.11822/8287
[Accessed 3 June 2019].

Enz, C. & Siguaw, J., 1999. Best hotel environmental practices. *Cornell Hotel and Restaurant Administration Quarterly,* 40(5), pp. 72-77.

Erdogan, N., 2007. Environmental management of small-sized tourism accommodations in Turkey. *Journal of Applied Science,* Volume 7, pp. 1124-1130.

Faulk, E., 2000. *A survey of environmental management by hotels and related tourism business,* Englisch-Gruss: University Center Cesar Ritz.

FHRAI, n.d. *FH&RA India.* [Online]
Available at: https://www.fhrai.com/regional_association.aspx
[Accessed 3 November 2019].

Fineman, S. & Clarke, K., 1996. Green stakeholders: Industry interpretations and response. *Journal of Management studies,* 33(6), pp. 715-730.

Fischer, K. & Schot, J., 1993. *Environmental Strategies for Industry: International perspectives on research needs and policy implications.* Washington DC: Island Press.

Font, X. & Buckley, R., 2001. Tourism Ecolabelling. Certification and Promotion of Sustainable Management. In: Wallingford: CaBI, pp. 565-567.

Foster, S., Sampson, S. & Dunn, S., 2000. The Impact of Customer Contact on environmental initiative for service firms. *International Journal of Operation and Production Management,* 20(2), pp. 187-203.

Fowler Jr, F., 1993. *Survey research methods.* 2nd ed. CA: Sage Publications.

Fukey, L. & Issac, S., 2014. Connect among green, sustainability and hotel industry: a prospective simulation study. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering,* 6(8), pp. 296-312.

Gamba, R. & Oskamp, S., 1994. Factors influencing community residents' participation in commingled curbside recycling program. *Environment and Behavior,* 26(5), pp. 587-612.

Gartner, W. C., 1996. *Tourism Developement.* Bristol: Van Nostrand Reinhold.

Gerstenfeld, A. &. R. H., 2000. Size matters: barriers and prospects for environmental management in small and medium-sized enterprises. Small and medium-sized enterprises and the environment. In: R. Hillary, ed. *Small and medium-sized enterprises and the environment.* Sheffield: Greenleaf, pp. 106-119.

Gil, M., Jiménez, J. & Lorente, J., 2001. An analysis of environmental management, organizational context and performance of Spanish hotels. *Omega,* 29(6), pp. 457-471.

Gladwin, T., Kennelly, J. & Krause, T., 1995. Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of management Review,* 20(4), pp. 874-907.

González, M. a. L. C., 2001. The adoption of environmental innovations in the hotel industry of Gran Canaria. *Tourism economics,* 7(2), pp. 177-190.

Gooch, G. D., 1995. Environmental beliefs and attitudes in Sweden and the Baltic states. *Environment and behavior,* 27(4), pp. 513-539.

Goodland, R., 1995. The concept of environmental sustainability. *Annual review of ecology and systematics,* 26(1), pp. 1-24.

Gössling, S., 2002. Global environmental consequences of tourism. *Global environmental change,* 12(4), pp. 283-302.

Gou, Z., Lau, S. & Prasad, D., 2013. Market readiness and policy implications for green buildings: case study from Hong Kong. *Journal of Green Building,* 8(2), pp. 162-173.

Graci, S. & Dodds, R., 2008. Why go green? The business case for environmental commitment in the Canadian hotel industry. *Anatolia,* 19(2), pp. 251-270.

Graci, S. & Kuehnel, J., 2011. *How to increase your bottom line by going green.* [Online]
Available at: http://green.hotelscombined.com/Pages/MainGreen/Downloads/green-hotel-whitepaper.pdf
[Accessed 10 September 2018].

Green Hotels Association, n.d. *What are Green Hotels?.* [Online]
Available at: http://greenhotels.com/index.php
[Accessed 2 June 2018].

Gupta, A. & Govindarajan, V., 2000. Knowledge flows within multinational corporations. *Strategic management journa,* 21(4), pp. 473-496.

Gustin, M. & Weaver, P., 1996. Are hotels prepared for the environmental consumer?. *Hospitality Research Journal,* 20(2), pp. 1-14.

Hall, C. et al., 2016. Accommodation consumers and providers' attitudes, behaviours and practices for sustainability: A systematic review. *Sustainability,* 8(7), p. 625.

Han, H., Hsu, L. & Sheu, C., 2010. Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism management,* 31(3), pp. 325-334.

Hart, S. & Ahuja, G., 1996. Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance. *Business strategy and the Environment,* 5(1), pp. 30-37.

Hays, D. & Ozretic-Došen, D., 2014. Greening hotels-building green values into hotel services. *Tourism and Hospitality Mahagement,* 20(1), pp. 85-102.

Hemingway, C. A., 2005. Personal Values as A Catalyst for Corporate Social. *Journal of Business Ethics ,* 60(3), pp. 233-249.

Hemingway, C. & Maclagan, P., 2004. Managers' personal values as drivers of corporate social responsibility. *Journal of Business Ethics,* 50(1), pp. 33-44.

Hillary, R., 1998. Pan European Union assessment of EMAS implementation. *Environmental Policy and Governance,* 8(6), pp. 184-192.

Hillary, R., 2017. *Small and medium-sized enterprises and the environment: business imperatives.* 1st Edition ed. London: Routledge.

Hines, J., Hungerford, H. & Tomera, A., 1987. Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of environmental education,* 18(2), pp. 1-8.

Hitchens, D. et al., 2005. Environmental performance, competitiveness and management of small businesses in Europe. *Tijdschrift voor economische en sociale geografie,* 96(5), pp. 541-557.

Holland, L. & Gibbon, J., 1997. SMEs in the metal manufacturing, construction and contracting service sectors: environmental awareness and actions. *Eco-Management and Auditing,* 4(1), pp. 7-14.

Hotel Classification, n.d. *hmtutor.com.* [Online]
Available at: http://www.hmtutor.com/32-2/hotel-classification/
[Accessed 15 March 2019].

Houdré, H., 2008. *Sustainable Developement in the Hotel Industry,* New York: Cornell Hospitality Industry Perspectives.

HRACC, 2017. *Guidelines for Hotel Approvals and Classification & Reclassification.* [Online] Available at: http://tourism.gov.in/sites/default/files/HRACC%20Guidelines%20for%20Hotels2.pdf [Accessed 19 January 2018].

IGBC, n.d. *Indian Green Building Council (IGBC).* [Online] Available at: https://igbc.in/igbc/redirectHtml.htm?redVal=showLeedsignin#GreenHomes [Accessed 14 October 2019].

India Brand Equity Foundation, 2018. *Tourism & Hospitality,* New Delhi: India Brand Equity Foundation.

International Hotels Environment Initiatives, 1996. *Environmental management for hotels: the industry guide to best practice.* Oxford: Butterworth-Heinemann Ltd..

Iwanowski, K. & Rushmore, C., 1994. Introducing the Eco-Friendly Hotel: There are lots of reasons to pay attention to eco-tourism and, let's face it, the main ones have to do with money. *Cornell Hotel and Restaurant Administration Quarterly,* 35(1), pp. 34-38.

Jauhari, V. & Manaktola, K., 2007. Exploring Customer Attitute abd behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality management,* 19(5), pp. 364-377.

Kaiser, F., Wölfing, S. & Fuhrer, U., 1999. Environmental attitude and ecological behaviou. *Journal of environmental psychology,* 19(1), pp. 1-19.

Kang, K., Stein, L., Heo, C. & Lee, S., 2012. Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management,* 31(2), pp. 564-572.

Kannampilly, P., 2012. *Concept Hospitality.* [Online] Available at: https://www.concepthospitality.com/consultant/press_releases.htm [Accessed 2 March 2019].

Kanuk, L. & Berenson, C., 1975. Mail surveys and response rates: A literature review. *Journal of marketing research,* 12(4), pp. 440-453.

Kapiki, S., 2012. Implementing sustainable practices in greek eco-friendly hotels. *Journal of Environmental Protection and Ecology,* Volume 13, p. 1117–1123.

Kasim, A., 2007. Towards a Wider Adoption of Environmental Responsibility in the Hotel Sector. *International Journal of Hospitality & Tourism Adminstration,* 8(2), pp. 25-49.

Kasim, A., 2009. Managerial attitudes towards environmental management among small and medium hotels in Kuala Lumpur. *Journal of Sustainable Tourism,* 17(6), pp. 709-725.

Kelly, B. C., 2012. *Environmental Attitudes And Behaviors: The Issue And Its Dimensions,* Florida: B.S. University of Central Florida.

Kerlinger, P. & Lein, M., 1986. Differences in winter range among age-sex classes of Snowy Owls Nyctea scandiaca in North America. *Ornis Scandinavica,* 17(1), pp. 1-7.

Kim, H., Park, J. & Wen, J., 2015. General managers' environmental commitment and environmental involvement of lodging companies: The mediating role of environmental management capabilities. *International Journal of Contemporary Hospitality Management,* 27(7), pp. 1499-1519.

King, A. & Lenox, M., 2001. Does it really pay to be green? An empirical study of firm environmental and financial performance: An empirical study of firm environmental and financial performance. *Journal of Industrial Ecology,* 5(1), pp. 105-116.

Kirk, D., 1995. Environmental management in hotels. *International journal of contemporary hospitality management,* 7(6), pp. 3-8.

Kirk, D., 1996. *Environmental management for Hotels.* 1st ed. London: Routledge.

Kirk, D., 1998. Attitudes to environmental management held by a group of hotel managers in Edinburgh. *International Journal of Hospitality Management,* 17(1), pp. 33-47.

Klassen, R. & Whybark, D., 1999. The impact of environmental technologies on manufacturing performance. *Academy of Management journal,* 42(6), pp. 599-615.

Kollmuss, A. & Agyeman, J., 2002. Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior?. *Environmental education research,* 8(3), pp. 239-260.

Kuhn, R. & Jackson, E., 1989. Stability of factor structures in the measurement of public environmental attitudes. *The Journal of Environmental Education,* 20(3), pp. 27-32.

Kumar, P., Kumar, S. & Joshi, L., 2014. Environmental Legislations: India and Punjab. In: 1st, ed. *Socioeconomic and Environmental Implications of Agricultural Residue Burning.* New Delhi: Springer, pp. 91-116.

Kumar, S., 2005. Resource use and waste management in Vietnam hotel industry. *Journal of cleaner production,* 13(2), pp. 109-116.

Kumar, S., 2011. *Benchmarking Energy Use in Buildings and Cleanrooms.* [Online] Available at: https://docplayer.net/56313573-Benchmarking-energy-use-in-buildings-and-cleanrooms.html
[Accessed 13 November 2018].

Kwong, H., 2005. *Integrated Environmental Management in the Hotel Industry In Hong Kong,* Hong Kong: University of Hong Kong.

Lakshmi, D. K. V., 2002. *Environmental Management System ISO 14001 in hotel industry.* s.l.:s.n.

Lee, J., Hsu, L., Han, H. & Kim, Y., 2010. Understanding how consumers view green hotels: how a hotel's green image can influence behavioural intentions. *Journal of sustainable tourism,* 18(7), pp. 901-914.

Legrand, W., Chen, J. & Sloan, P., 2013. *Sustainability in the Hospitality Industry 2nd Ed: Principles of Sustainable Operations.* 2nd ed. s.l.:Routledge.

Leondakis, N., 2009. *The green room association meeting.* s.l.:Association Meetings.

Lepoutre, J. & Heene, A., 2006. Investigating the impact of firm size on small business social responsibility: A critical review. *Journal of business ethics,* 67(3), pp. 257-273.

Leroux, E. & Pupion, P., 2018. Factors of adoption of eco-labelling in hotel industry. *Technological Forecasting and Social Change,* Volume 129, pp. 194-209.

Levy, J. I. &. D. K. M., 2000. Economic incentives for sustainable resource consumption at a large university–past performance and future considerations. *International Journal of Sustainability in Higher Education,* 1(3), pp. 252-266.

Le, Y. et al., 2006. Environmental management: A study of Vietnamese hotels. *Annals of Tourism Research,* 33(2), pp. 545-567.

Losanwe , l., 2013. *Environmentally Friendly Luxury Hotel: case: Grand Palace Hotel, Riga,* Riga, Latvia: LAHTI UNIVERSITY OF APPLIED SCIENCES.

Lundberg, E., 2011. *Evaluation of Tourism Impacts– a sustainable development perspective,* Gothenburg: Unpublished thesis of University of Gothenburg, Sweden..

Madden, T., Ellen, P. & Ajzen, I., 1992. A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and social psychology Bulletin,* 18(1), pp. 3-9.

Maleviti, E., Mulugetta, Y. & Wehrmeyer, W., 2012. Energy consumption and attitudes for the promotion of sustainability in buildings: The case of hotels. *International Journal of Energy Sector Management,* 6(2), pp. 213-227.

Market Research and Statistics, 2018. *India Tourism Statistics at a Glance 2018.* [Online] Available at: http://tourism.gov.in/market-research-and-statistics
[Accessed 4 Feb 2019].

Massoud, M., Fayab, R., El-Fadel & Kamleh, R., 2009. Drivers, barriers, and incentives to implementing environmental management systems in the food industry: A Case of Lebanon. *Journal of Cleaner Production,* 18(3), pp. 200-209.

McGee, J., 1998. Commentary on 'corporate strategies and environmental regulations: An organizing framework'by AM Rugman and A. Verbeke. *Strategic management journal,* 19(4), pp. 377-387.

McNamara, K. & Gibson, C., 2008. Environmental sustainability in practice? A macro-scale profile of tourist accommodation facilities in Australia's coastal zone. *Journal of sustainable tourism,* 16(1), pp. 85-100.

Melnyk, S., Sroufe, R. & Calantone, R., 2003. Assessing the impact of environmental management systems on corporate and environmental performance. *Journal of operations management,* 21(3), pp. 329-351.

Mensah, I., 2006. Environmental management practices among hotels in the greater Accra region. *International Journal of Hospitality Management,* 25(3), pp. 414-431.

Mensah, I., 2007. *Environmental management practices in US hotels,* Atlanta: Cecil B.Day School of Hospitality Adminstration.

Mensah, I. & Blankson, E., 2014. Commitment to environmental management in hotels in Accra. *International Journal of Hospitality & Tourism Administration,* 15(2), pp. 150-171.

Merritt, Q., 1998. EM into SME won't go? Attitudes, awareness and practices in the London borough of Croydon. *Business Strategy and the Environment,* 7(2), pp. 90-100.

Mester, I. et al., 2016. Attitudes and practices concerning sustainability. A research case on Romanian tourism ventures. *Journal of Environmental Protection and Ecology,* Volume 17, pp. 687-695.

Micioni, C. W., 2009. *Going green in the hospitality industry,* Las Vegas: Digital Scholarship@UNLV.

Min, W., 2011. An Analysis on Environmental Awareness and Behavior in Chinese Hospitality Industry—A Case of Xiamen City. *Energy Procedia,* Volume 5, pp. 1126-1137.

Mir, D. & Feitelson, E., 2007. Factors Affecting Environmental Behavior in Micro-enterprises: Laundry and Motor Vehicle Repair Firms in Jerusalem. *International Small Business Journal,* 25(4), pp. 383-415.

Mittal, V. & Sangwan, K., 2014. Prioritizing barriers to green manufacturing: environmental, social and economic perspectives. *Procedia Cirp,* Volume 17, pp. 559-564.

Mohan, V., 2016. *Delhi, Punjab, Rajasthan and Haryana headed the Latur way as groundwater extraction soars.* [Online]
Available at: https://timesofindia.indiatimes.com/city/delhi/Delhi-Punjab-Rajasthan-and-Haryana-headed-the-Latur-way-as-groundwater-extraction-soars/articleshow/51860478.cms
[Accessed 22 May 2018].

Mowforth, M. & Munt, L., 1998. Tourism and Sustainability: New Tourism in the Third World. *Annals of the Association of American Geographers,* 90(3), pp. 625-627.

Nachmias, D. &. N. C., 1976. *Research methods in the social sciences.* 1st ed. New York: St.Martin's Press.

Nath, A., 2014. *Profitability and Sustainability from Waste Management Practices in Hotels,* Noida: Jaypee Institute of Information Technology.

Omidiani, A. & HashemiHezaveh, S., 2016. Waste management in hotel industry in India: A review. *International Journal of Scientific and Research Publications,* 6(9), pp. 670-680.

Pandey, S., 2015. *Industrial and urban waste management in Punjab,* New Delhi: T E R I.

Park, J., 2009. *The Relationship Between Top Managers'Environmental Attitudes and Environmental Management In Hotel Companies,* Blacksburg: Virginia Tech.

Park, J., Jeong Kim, H. & McCleary, K., 2014. The impact of top management's environmental attitudes on hotel companies' environmental management. *Journal of Hospitality & Tourism Research,* 38(1), pp. 95-115.

Park, J. & Kim, H., 2014. Environmental proactivity of hotel operations: Antecedents and the moderating effect of ownership type. *International Journal of Hospitality Management,* Volume 37, pp. 1-10.

Pe'er, S., Goldman, D. & Yavetz, B., 2007. Environmental literacy in teacher training: Attitudes, knowledge, and environmental behavior of beginning students. *The Journal of Environmental Education,* 39(1), pp. 45-59.

Penny, W., 2007. The use of environmental management as a facilities management tool in the Macao hotel sector. *Facilities,* Volume 25, pp. 286-295.

Pereira-Moliner, J. et al., 2015. The Holy Grail: Environmental management,competitive advantage and business performance in the Spanish hotel industry. *International Journal of Contemporary Hospitality Management,* 27(5), p. 714 – 738.

Petty, R. & Wegener, D., 1998. Attitude Change: Multiple Roles for Persuasion Variables. In: S. F. G. L. D. Gilbert, ed. *The Handbook of Social Psychology.* 4th ed. New Haven: McGraw-Hill, pp. 323-390.

Phillips, L., 1981. Assessing measurement error in key informant reports: A methodological note on organizational analysis in marketing. *Journal of marketing research,* 18(4), pp. 395-415.

Pigram, J. & Wahab, S., 1997. Sustainable tourism in a changing world. In: S. W. John J. Pigram, ed. *Tourism, development and growth: The challenge of sustainability.* s.l.:Routledge, pp. 27-41.

Post, J. & Altmanm, B., 1994. Managing the environmental change process: Barriers and opportunities. *Journal of Organizational Change Management,* 7(4), pp. 64-83.

Prayag , G., Dookhony-Ramphul, K. & Maryeven, M., 2010. Hotel development and tourism impacts in Mauritius: Hoteliers' perspectives on sustainable tourism.. *Development Southern Africa,,* 27(5), pp. 697-712.

Press Trust of India, 2013. *Punjab tops in power consumption: Assocham study.* [Online]
Available at: https://www.business-standard.com/article/economy-policy/punjab-tops-in-power-consumption-assocham-study-110092000111_1.html
[Accessed 2 November 2019].

Press Trust of India, 2015. *Punjab govt to make Siswan forest area as eco-tourism hub.* [Online]
Available at: https://www.business-standard.com/article/pti-stories/punjab-govt-to-make-siswan-forest-area-as-eco-tourism-hub-115020501108_1.html
[Accessed 22 May 2018].

Press Trust of India, 2018. *Tourism ministry bags Rs 2,150 crore grant in Budget 2018-19.* [Online]
Available at: https://www.indiatoday.in/pti-feed/story/tourism-ministry-bags-rs-2150-crore-grant-in-budget-2018-19-1159946-2018-02-01
[Accessed 10 March 2019].

Punjab Pollution Control Board, 2013-14. *Municipal waste generated and treated in Punjab.* [Online]
Available at: http://punenvis.nic.in/index2.aspx?slid=2134&mid=1&langid=1&sublinkid=421
[Accessed 20 October 2018].

Punjab Pollution Control Board, 2013. *Solid Waste.* [Online]
Available at:
http://www.punenvis.nic.in/index1.aspx?lid=5735&mid=1&langid=1&linkid=1295
[Accessed 6 Feb 2017].

Punjab Tourism, 2018. *Punjab Tourism Statistic Survey.* [Online]
Available at: http://punjabtourism.gov.in/Punjab.html#/StatisticsSurveys
[Accessed 21 August 2019].

Quazi, H. A., 2001. Sustainable development: integrating environmental issues into strategic planning. *Industrial Management & Data Systems,* 101(2), pp. 64-70.

Quazi, H., Khoo, Y., Tan , C. & Wong, P., 2001. Motivation for ISO 14000 certification: development of a predictive model. *Omega,* 29(6), pp. 525-542.

Raderbauer, M., 2011. *The Importance of sustainable practices in the Viennese Accomodation Industry,* University of Exeter: Unpublished.

Rahman, I., Reynolds, D. & Svaren, S., 2012. How “green” are North American hotels? An exploration of low-cost adoption practices. *International Journal of Hospitality Management,,* 31(3), pp. 720-727.

Rashid, Z., Sambasivan, M. & Rahman, A., 2004. The influence of organizational culture on attitudes toward organizational change. *Leadership & organization development Journal,* 25(2), pp. 161-179.

Revell, A. & Blackburn, R., 2007. The business case for sustainability? An examination of small firms in the UK's construction and restaurant sectors. *Business strategy and the environment,* 16(6), pp. 404-420.

Rivera, J., 2002. Assessing a voluntary environmental initiative in the developing world: The Costa Rican Certification for Sustainable Tourism. *Policy Sciences,* 35(4), pp. 333-360.

Robinson, M. e., 2000. *Environmental Management and Pathways to Sustainable Tourism: Reflectionc on International Tourism,* Sheffield: Sheffield Hallam University..

Rowe, K. A., 2018. *Hoteliers' Perceptions of Sustainable Practices on Small Hotel Optimization: A Phenomenology Inquiry,* Washington: Walden University.

Rowlinson, S. M., 1998. *An analysis of factors affecting project performance in industrial buildings with particular reference to design build contracts,* London: Brunel University.

Russo, M. & Fouts, P., 1997. A resource-based perspective on corporate environmental performance and profitability. *Academy of management Journal,* 40(3), pp. 534-559.

Saenyanupap, S., 2011. *Hotel Manager Attitudes Toward Environmental Sustainability Practices Empirical Findings From Hotels In Phuket, Thailand.,* Florida: University of Central Florida.

Sarmah, R. & Nim, D., 2019. Factors Affecting Awareness and Perception of Youth Regarding the Public Health and Hygiene Related Compaighs through Social Marketing. *Indian Journal of Public Health Research & Developement,* 10(7), pp. 248-253.

Sarraf, S., Anand, S. & Mathew, P., 2014. *Exploratory Data Analysis of Indian Hotel,Benchmarking Data:Set-Key Findings and Recommendations,* New Delhi: Centre for Building Energy Research and Developement.

Scanlon, N. L., 2007. An analysis and assessment of environmental operating practices in hotel and resort properties. *International Journal of Hospitality Management,* 26(3), pp. 711-723..

Scott, D. & Willits, F., 1994. Environmental attitudes and behavior: A Pennsylvania survey. *Environment and behavior,* 26(2), pp. 239-160.

Shapiro, R. & Magretta, J., 1997. Growth through global sustainability. *Harvard Business Review,* 75(1), pp. 78-89.

Sharfman, M., 1998. On the advisability of using CEOs as the sole informant in strategy research. *Journal of Managerial Issues,* pp. 373-392..

Sharma, M., 2017. *Rich in monuments, Punjab gets a tourism high: From 28th spot to 12th in eight years.* [Online]
Available at: https://www.hindustantimes.com/punjab/rich-in-monuments-punjab-gets-a-tourism-high-from-28th-spot-to-12th-in-eight-years/story-Jm2ybgRfm4kvydeGkFLUSI.html
[Accessed 10 Jan 2018].

Sharma, S., 2000. Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management Journal.,* 43(4), pp. 681-697.

Sharma, S., Pablo, A. & Vredenburg, H., 1999. Corporate environmental responsiveness strategies: the importance of issue interpretation and organizational context. *The Journal of Applied Behavioral Science,* 35(1), pp. 87-108.

Sharma, S. & Vredenburg, H., 1998. Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic management journal,* 19(8), pp. 729-753.

Shi, H., Peng, S., Liu, Y. & Zhong, P., 2008. Barriers to the implementation of cleaner production in Chinese SMEs: government, industry and expert stakeholders' perspectives. *Journal of Cleaner Production,* 16(7), pp. 842-852.

Shindle, D., 2013. *The Importance of Practicing Sustainability Within the Hospitality Industry.* [Online]
Available at: https://www.hotelexecutive.com/feature_focus/3448/the-importance-of-practicing-sustainability-within-the-hospitality-industry
[Accessed 12 May 2018].

Singh, A. & Singh, J., 2017. Service Sector Scenario of Punjab and Haryana. *International Journal of Research in Economics and Social Sciences,* 7(7), pp. 442-447.

Singleton, R., Straits, B. & Straits, M., 1993. *Approaches to Social Research.* 1st ed. Oxford: Oxford University Press.

Slater, S. & Narver, J., 1995. Market orientation and the learning organization. *Journal of marketing,* 59(3), pp. 63-74.

Sloan, P., Legrand, W. & Chen, J., 2005. Factors Influencing German Hoteliers' Attitudes Towards Environmental Management. *Advances in hospitality and leisure,* Volume 1, pp. 179-188.

Smith-Sebasto, N. J., 2000. Potential guidelines for conducting and reporting environmental education research: Qualitative methods of inquiry. *Environmental education research,* 6(1), pp. 9-26.

Starik, M. & Rands, G., 1995. Weaving an integrated web: Multilevel and multisystem perspectives of ecologically sustainable organizations. *Academy of Management Review,* 20(4), pp. 908-935.

Stipanuk, D., 2001. Energy management in 2001 and beyond: operational options that reduce use and cost. *Cornell Hotel and Restaurant Administration Quarterly,* 42(3), pp. 57-71.

Stipanuk, D. & Roffmann, H., 2015. *Hospitality Facilities Management and Design.* 4th ed. New York: Educational Institute of the American Hotel and Motel Association.

Telfer, D., 2012. The Brundtland Report (Our Common Future) and tourism. In: D. A. F. Andrew Holden, ed. *Routledge Handbook of Tourism and the Environment.* s.l.:Routledge, pp. 235-248.

Teng, C., Horng, J. & Hu, I., 2015. Hotel environmental management decisions: The stakeholder perspective. *International Journal of Hospitality & Tourism Administration,* 16(1), pp. 78-98.

Teng, C., Horng, J., Hu, M. & Chen, P., 2014. Exploring the energy and carbon literacy structure for hospitality and tourism practitioners: Evidence from hotel employees in Taiwan. *Asia Pacific Journal of Tourism Research,* 19(4), pp. 451-468.

Times of Malta, 2012. *timesofmalta.com.* [Online]
Available at: https://www.timesofmalta.com/articles/view/20120524/local/water-consumption-in-hotels-industry.421162
[Accessed 12 July 2019].

Tsai, Y. H., 2014. Attitude towards green hotel by hoteliers and travel agency managers in Taiwan. *Asia Pacific Journal of Tourism Research,* 19(9), pp. 1091-1109.

Tzschentke, N., Kirk, D. & Lynch, P., 2004. Reasons for going green in serviced accommodation establishments. *International journal of contemporary hospitality management,* 16(2), pp. 116-124.

Tzschentke, N., Kirk, D. & Lynch, P., 2008. Going green: Decisional factors in small hospitality operations. *International Journal of Hospitality Management,* 27(1), pp. 126-133.

UNI, 2015. *Eco Tourism Project Submitted to Central India.* [Online]
Available at: http://www.uniindia.com/eco-tourism-project-submitted-to-central-govt-thandal/states/news/307983.html
[Accessed 2 November 2019].

UNWTO, 2005. *Sustainable Developement.* [Online]
Available at: http://sdt.unwto.org
[Accessed 12 May 2017].

Ustad, B., 2010. *The adoption and implementation of environmental management systems in New Zealand hotels: the managers' perspective,* Auckland: Auckland University of Technology.

Verma, A., 2012. *Hotels in India going green.* [Online]
Available at: https://www.livemint.com/Opinion/pLqx0BK50LY8SVw6CjA2rK/Hotels-in-India-going-green.html
[Accessed 23 April 2018].

Wan, Y. C. S. a. H. H., 2017. Environmental awareness, initiatives and performance in the hotel industry of Macau. *Tourism Review,* 72(1), pp. 87-103.

Wheeler, D., 1999. *Greening industry: New roles for communities, markets, and governments,* Washington: Oxford University Press.

Wu, C. W., 2003. *An empirical study of marketing environment strategy and performance in the property market,* Glasgow: University of Glasgow.

Yol Lee, S. & Rhee, S., 2007. The change in corporate environmental strategies: a longitudinal empirical study. *Management Decision,* 45(2), pp. 196-216.

Yusof, Z. B. &. J. M., 2013. Green approaches of Malaysian green hotels and resorts. *Procedia-Social and Behavioral Sciences,* Volume 85, pp. 421-431.

Zaiton Samdin, K. A. B. H., 2012. Factors Influencing Environmental Management Practices Among Hotels in Malaysia. *International Journal of Social,Behavirol,Education,Business and Industrial Engineering,* 6(5), p. 8487.

Zein, K. W. M. a. M. G., 2008. Best environmental practices for the hotel industry. In: *Sustainable Business Associates.* s.l.:s.n.

Zutshi, A. &. S. A. S., 2004. Adoption and maintenance of environmental management systems: critical success factors. *Management of Environmental Quality: An International Journal,* 15(4), pp. 339-419.

Appendix 1 Covering Letter for Research Questionnaire

Dear Mr. /Ms. < Last Name

I invite you to participate in a survey of the relationship of Managerial Environmental Attitude and Implementation of ESPs in the Hotel Industry of Punjab.

This survey is being conducted as part of doctoral thesis that shows how the managerial environmental attitude determines the actual, adoption and implementation of ESPs in the region.

I believe that the results of this thesis will provide significant practical implications for the growth of environmental sustainable actions in the state.

The questionnaire is easy and requires about 15 minutes to complete.

If you choose to participate, you have option to mention your name or not on the questionnaire. I do not need to know who you are and no one will know whether you participated in this study. Your responses will not be identified with you personally, nor will anyone be able to determine which company you work for. Nothing you say on the questionnaire will in any way influence your present or future employment with your company.

I hope you will take a few minutes to complete this questionnaire. Without the help of people like you, this research could not be conducted.

If you have any queries, please write or call Baljit Kaur

KC College of Hotel Management, Nawanshahr,

Punjab-144514

Contact Number: 9914300582

Email ID:baljitkr01@gmail.com

Appendix 2

RESEARCH QUESTIONNAIRE

Survey of Environmental Sustainable Practices in Hotels of Punjab
Part A: Basic description and characteristics about hotel & person filling questionnaire

1) Name of person filling questionnaire _____

2) Contact Number _____

3) Email ID. _____

4) Gender: Male Female

5) Designation _____

6) Name of the Hotel _____

7) City _____

8) Age of Property _____

9) Classification/Category of Hotel:

luxury hotels providing five star facilities deluxe/7 Star ( ) luxury Hotels providing luxury hotels providing five star facilities ( ) 4 Star ( )

3 Star ( )
Others (Please Specify) _____

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9) Classification/Category of Hotel:

luxury hotels providing five star facilities deluxe/7 Star ( ) luxury Hotels providing luxury hotels providing five star facilities ( ) 4 Star ( )

3 Star ( )
Others (Please Specify) _____

10) Type of Ownership of Hotel:
Part of international chain or group ( ) Part of locally operated chain or group ( )

Foreign owned and operated ( ) locally owned and operated ( )

Others (Please Specify) _____

11) Number of Rooms:

More than 100 ( ) 76-100 ( ) 51-75 ( ) 26-50 ( )
10-25 ( )

Others (Please Specify) _____

12) Type of Hotel

Resort ( ) Heritage ( ) Business ( ) Leisure ( )

Others (Please Specify) _____

13) Type of Clienteles:

Luxury ( ) Mid-Range ( ) Budget ( ) Business ( )

Others (Please Specify) _____

14) Basic Tariff:

1000-3000 ( ) 3001-5000 ( ) 5001-7000 ( ) More than 7000 ( )

Others (Please Specify) _____

Part B: Attitudes- The listed statements below concern the relationship between human and environment. Please circle the number representing your views on the following statements.

S.No.	1=strongly disagree,2-disagree,3-neither agree nor disagree,4-agree, 5=strongly agree					
1.	**Environment helps to attract tourists to a destination**	1	2	3	4	5
2.	Mass human activities interfere with nature and it often produces disastrous consequences	1	2	3	4	5
3.	**Hotel industry should follow the laws of nature**	1	2	3	4	5
4.	Hotels are seriously abusing the environment.	1	2	3	4	5

5.	**Hotels have plenty ways to sustain the natural resources if we just learn how to execute them**	1	2	3	4	5
6.	Hotels have the right to modify the natural environment to suit their needs	1	2	3	4	5
7.	**Hotel ingenuity will insure that we do not make the Earth unliveable**	1	2	3	4	5
8.	Humans were meant to rule over the rest of nature	1	2	3	4	5
9.	**If things continue their present course, we will soon experience a major ecological disaster**	1	2	3	4	5
10.	Certificated environmentally friendly hotel (eco-labelled) make a change on your hotel image	1	2	3	4	5
11.	**luxury and environmental friendliness could be combine/integrate**	1	2	3	4	5
12.	Customers will be ready to pay more (because of the hotel environmental sustainable practices)	1	2	3	4	5
13.	By implementing environmental sustainable practices, it be possible to enchain a new type of clients	1	2	3	4	5
14.	**Would you be ready to go for environmental certification?**	1	2	3	4	5
15.	What do you think – would the hotel (hotel management, hotel owners) be ready to invest some money and time to become more environmentally friendly or even to get some official environmental certificate/label?	1	2	3	4	5

Part C: Implementation of Environmental Sustainable Practices in Your Business

S.No.	1=To no extent,2-To a very little extent,3-To some extent,4-Toa great extent, 5=To very great extent

1	**Implementing renewable energy program (e.g. wind or solar Power)**	1	2	3	4	5
2	Energy saving stickers are put at appropriate places in hotel	1	2	3	4	5
3	**Donation/sale of leftover food to local organizations**	1	2	3	4	5
4	Sorting of waste according to type	1	2	3	4	5
5	**Donation/auction of hotel furniture**	1	2	3	4	5
6	Composts organic kitchen waste	1	2	3	4	5
7	**Water efficient appliances**	1	2	3	4	5
8	Low flow shower heads	1	2	3	4	5
9	**Low flow or dual flush toilets**	1	2	3	4	5
10	Faucets aerators	1	2	3	4	5
11	**Rain water harvesting**	1	2	3	4	5
12	Refillable thermos flasks instead of mineral water bottles	1	2	3	4	5
13	**Sewage treatment plant**	1	2	3	4	5
14	Double glazed vacuum sealed windows	1	2	3	4	5
15	**Using energy efficient lighting**	1	2	3	4	5
16	Installs occupancy sensors or a key card control system in guest rooms to reduce in room energy consumption	1	2	3	4	5
17	**Implementing water efficient gardening programs (e.g. using treated water in garden irrigation or adopting xeric gardening techniques)**	1	2	3	4	5
18	Using environmental friendly cleaning agents	1	2	3	4	5

19	**Encouraging guest to reuse towels and bed linen**	1	2	3	4	5

20	Energy efficient laundry	**1**	**2**	**3**	**4**	**5**
21	**Programmable thermostat**	1	2	3	4	5
22	Led exist signs	1	2	3	4	5
23	**Conducting an energy audit**	1	2	3	4	5
24	Having a written environmental policy	1	2	3	4	5
25	**Conducting an environmental audit**	1	2	3	4	5
26	Subscribing to a formal environmental certification programme (such as ISO 14001 or EMAS or similar)	1	2	3	4	5
27	**Conducting staff training on environmental issues**	1	2	3	4	5
28	Educate guests on environmental sustainable practices	1	2	3	4	5
29	**No VOC paint**	1	2	3	4	5
30	Fans installed in room and option to open windows for fresh air	1	2	3	4	5
31	**Purchasing goods in bulk**	1	2	3	4	5
32	Goods purchased are of recycled material	1	2	3	4	5
33	**Individuals are taking responsibility for environmental management**	1	2	3	4	5
34	Refillable amenity dispensers used rather than individual bottles for bathroom amenities	1	2	3	4	5
35	Stationary from handmade or recycled paper	1	2	3	4	5

36	**Laundry Paper/ Cloth bags rather than plastic bags**	**1**	**2**	**3**	**4**	**5**
37	Recycled Biodegradable Garbage Bags	**1**	**2**	**3**	**4**	**5**
38	**Pencils and not plastic pens**	**1**	**2**	**3**	**4**	**5**
39	Laundry washing machines are run on full load	**1**	**2**	**3**	**4**	**5**

Part D: Motivational Factors Behind Implementing the Environmental Sustainable Practices

S.No.	1=strongly disagree,2-disagree,3-neither agree nor disagree,4-agree, 5=strongly agree					
1	**To save environment**	1	2	3	4	5
2	Legislation	1	2	3	4	5
3	**Govt. Incentive**	1	2	3	4	5
4	Reduced operational cost	1	2	3	4	5
5	**Demand of customer**	1	2	3	4	5
6	Improved public image	1	2	3	4	5
7	**An edge over competitor**	1	2	3	4	5
8	Improved relation with community	1	2	3	4	5
9	**Increased employee satisfaction**	1	2	3	4	5
10	Contributes to increasing market share	1	2	3	4	5

11	**Personal awareness of hotel manager**	1	2	3	4	5
12	Quality service in clean environment	1	2	3	4	5
13	**Top management support**	1	2	3	4	5

Part E: Barrier behind Implementing Environmental Sustainable Practices

S.No.	1=strongly disagree,2-disagree,3-neither agree nor disagree,4-agree, 5=strongly agree					
1	**Weak Legislation**	1	2	3	4	5
2	Ineffective and/or non-enforcement of laws; corruption; inadequate monitoring mechanism	1	2	3	4	5
3	**Initial Implementation cost**	1	2	3	4	5
4	Uncertain and/or insignificant economic advantage; slow return on investment	1	2	3	4	5
5	**Low Top Management Commitment**	1	2	3	4	5
6	Existing non-supportive structure	1	2	3	4	5
7	**Guests are uncooperative**	1	2	3	4	5
8	Lack of professional help	1	2	3	4	5
9	**Lack of awareness of concept**	1	2	3	4	5
10	Complicated certification process	1	2	3	4	5
11	**Limited green technology**	1	2	3	4	5

12	Little guest concern	1	2	3	4	5
13	**Change of routines and management style**	1	2	3	4	5
14	Certification is costly	1	2	3	4	5

Do you allow the researcher to use the name of your hotel in research report?

Yes No

Thanks for your participation

Appendix 3 List of Hotels (HRANI)

S.No	Hotel Name	City	Category	Website
	Amritsar			
1	Ramada	Amritsar	4 Star	www.ramadaamritsar.com
2	Radisson Blu Hotel Amritsar	Amritsar	5 Star Deluxe	www.radissonblu.com, hotel_amritsar
3	Mohan International Hotel	Amritsar	4 Star	www.mohaninternationalhotel.com
4	Mango Suites Gsk	Amritsar	3 Star	
5	M.K. Hotel	Amritsar	4 Star	www.mkhotel.com
6	Hyatt Amritsar	Amritsar	5 Star Deluxe	www.amritsar.hyatthotels.hyatt.com
7	Hotel Royal Castle	Amritsar	3 Star	www.royalcastleass.com
8	Hotel Ritz Plaza	Amritsar	4 Star	www.ritzhotel.in
9	Hotel P R Residency	Amritsar	3 Star	www.hotelprresidency.com
10	Hotel Golden Tulip	Amritsar	3 Star	www.goldentulipamritsar.co.in
11	Hotel C J International	Amritsar	3 Star	www.hotelcj.in
12	Hk Clarks Inn	Amritsar	4 Star	www.clarksinn.in
13	Avaas Life Style Hotel	Amritsar	4 Star	www.avaas.in
14	Hotel Suncity Towers	Amritsar	2 Star	www.hotelsuncitytowers.com

	Mohali/Zirakpur			
1	Drive-In-22	Mohali	3 Star	--
2	Arista Hotel	Mohali	4 Star	www.aristahotels.com
3	Hotel The Majestic	Mohali	2 Star	www.hotelthemajestic.com
4	Shagun Restaurant & Banquet	Zirakpur	3 Star	www.hotelshagun.com
5	Park Plaza	Zirakpur	5 star	www.pkzirakpur.com
6	Hotel Maryland Best Western	Zirakpur	4 Star	www.bestwesternmarylandhotel.com
	Jalandhar			
1	WI Grand Hotel	Jalandhar	4 Star	www.wjgrandhotel.com
2	The Regent Park Hotel	Jalandhar	3 Star	www.regentparkhotel.net
3	The Maya	Jalandhar	3 Star	www.mayahotels.in
4	The Grand Lilly Resort	Jalandhar	3 Star	www.grandlillyresorts.com
5	Radisson Hotel Jalandhar	Jalandhar	5 Star Deluxe	www.radisson.com/jalandharin
6	Majestic Grand Hotel	Jalandhar	3 Star	www.majesticgrandhotel.com
7	Maharaja Residency Hotel P. Ltd.	Jalandhar	3 Star	www.hotelmaharajaresidency.com
8	Hotel President	Jalandhar	4 Star	www.presidenthoteljal.com
9	Hotel Plaza Bar & Restaurant	Jalandhar	3 Star	www.uptodateindia.biz/hotelplaza
10	Hotel M-1	Jalandhar	3 Star	www.hotelm1.com
11	Hotel Kamal Palace	Jalandhar	4 Star	www.hotelkamalpalace.com
12	Hotel Dolphin	Jalandhar	3 Star	www.hoteldolphin.com
13	Ambassador	Jalandhar	3 Star	www.ambassadorhoteljalandhar.com
14	Country Inn & Suites By Carlson	Jalandhar	3 Star	www.countryinns.com/jalandhar.in
15	Hotel Inderprasth	Jalandhar	2 Star	www.hotelinderprasth.in
16	Hotel Skylark & Rest Pvt. Ltd.	Jalandhar	2 Star	--
17	Hotel Shangri-La	Jalandhar	1 Star	www.hotelshangrilajalandhar.com
	Ludhiana			
1	Radisson Blu Hotel MBD	Ludhiana	5 Star Deluxe	www.radissonblu.com/hotel-ludhiana
2	Majestic Park Plaza	Ludhiana	5 Star	www.parkplaza.com
3	Keys Hotel	Ludhiana	3 Star	www.keyshotels.com
4	Hyatt Regency	Ludhiana	luxury Hotels providing five star facilities Deluxe facilities	www.ludhiana.regency.hyatt.com
5	Hotel Snehamohan Regency	Ludhiana	3 Star	www.hotelsnehmohanregency.com
6	Hotel Maharaja Regency	Ludhiana	3 Star	www.maharajagroup.in

7	Hotel Friends Regency	Ludhiana	3 Star	www.hotelfriendsregency.com
8	A Hotel	Ludhiana	3 Star	www.a-hotel.in
9	Hotel Greens	Ludhiana	2 Star	--
10	Hotel Natraj	Ludhiana	2 Star	www.hotelnatraj.in
11	Mahals Hotel Complex	Ludhiana	2 Star	--
12	Sagar Hotel	Ludhiana	2 Star	--

Additional Hotels				
1	Ramada City Centre	Jalandhar	4 Star	www.ramadajalandhar.com
2	Ramada Encore	Jalandhar	3 Star	www.ramadaencorejalandhar.com
3	Behl Regency	Zirakpur	3 Star	
4	Best Western	Jalandhar	4 Star	
5	Best Western	Nawanshahr	3 Star	
6	Clarion Inn	Zirakpur	4 Star	
7	Country Inn & Suites	Zirakpur	4 Star	
8	Cygnet Silver Leaf	Nawanshahr	4 Star	
9	Fairfield By Marriott	Amritsar	5 Star	
10	Grand Hotel	Nawanshahr	3 Star	
11	Hotel 6	Zirakpur	4 Star	
12	Kotari Resorts	Ludhiana	luxury hotels providing five star facilities	
13	Leo Fort Hotel	Jalandhar	3 Star	
14	Nirvana Green	Ludhiana	luxury hotels providing five star facilities	
15	Ramada	Mohali	4 Star	
16	Regent Central Klassik	Ludhiana	4 Star	
17	Sarovar Portica	Jalandhar	4 Star	
18	Silver Stone	Ludhiana	2 Star	
19	Hotel Narula's Aurrum	Amritsar	2 star	
20	Hotel Mm Yellowuds	Amritsar	2 star	
21	Hotel 42	Amritsar	2 star	
22	Hotel Sham Regency	Amritsar	3 star	
23	Hotel S K Residency	Amritsar	2 star	
24	Hotel Khyber Continental	Amritsar	2 star	
25	Hotel Sukhman International	Amritsar	2 star	
26	Hotel Jay Vee Continental	Amritsar	2 star	
27	Hotel Comfort Inn Alstonia	Amritsar	2 star	
28	Comfort Inn	Jalandhar	3 star	

29	La Cascade	Amritsar	3 star	
30	Nagpal Regency	Ludhiana	3 star	
31	Hotel Gulmor	Ludhiana	3 star	
32	Hotel Lamellz	Ludhiana	3 star	
33	Chevron International	Ludhiana	3 star	
34	Hotel Nanada	Ludhiana	2 Star	
35	Hotel Le Classic	Ludhiana	3 Star	
36	Hotel Sarovar Regency	Amritsar	2 Star	
37	Temple View	Amritsar	2 Star	
38	Hotel Residency	Jalandhar	2 Star	
39	Hotel Maharaja Residency	Jalandhar	2 Star	