Has the expectation for Environmental Sustainability in Delhi hotels by business travelers changed since 2007?

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Table of Contents

List of Abbreviations v
Attestation of Authorship vi
Acknowledgements vii
Abstract viii
1. Chapter – Introduction 1
1.1. Research Background 1
1.2. Research Aims 2
1.3. Research Objective 2
1.4. Justification for the Research 2
1.5. The Hospitality and Tourism Industry of India 4
1.6. India's Hotel Industry 5
1.7. Delhi's Hotel Industry 6
1.8. Structure of the Dissertation 7
2. Chapter – Literature Review 8
2.1. Introduction 8
2.2. Sustainability 8
2.3. Environmental Sustainability 10
2.4. Environmental Sustainability in Business 11
2.5. Environmental Sustainability in the Hospitality and Tourism Industry 13
2.6. Environmental Sustainability in Hotels 16
2.7. Supply Chain 18
2.8. Environmental Sustainability Standards, Systems and Accreditations 22
2.8.1. Environmental Sustainability Standards (ESS) - BS – 7750 24
2.8.2. Environmental Management System (EMS) 25
2.8.3. Environmental Sustainability Accreditations (ESA) 28
2.9. Conclusion 33
3. Chapter – Methodology 35

3.1. Introduction 35
3.2. Research Aims 35
3.3. Research Paradigm 35
3.3.1. Post-positivist 36
3.3.2. Quantitative Research 36
3.3.3. Deductive Reasoning 37
3.3.4. Ontology 37
3.3.5. Epistemology 37
3.4. Participation Selection 38
3.5. Snowball Sampling 38
3.6. Ethical Considerations 39
3.7. Questionnaire Design 39
3.8. Data Collection 39
3.9. Data Analysis 41
3.10. Limitations of the Research 41
4. Chapter – Findings 42
4.1. Demographics 43
4.1.1. Country of Residence 43
4.1.2. Usual Purpose of Visit to Delhi 43
4.1.3. Number of Trips and Age 44
4.2. Change in the Attitude of Business Travelers 44
4.3. Influence of Environmentally Sustainable Practice on Hotel Choice 47
4.3.1. Internationally recognized environmental certifications with influence on hotel choice 47
4.3.2. Green supplier influence on hotel choice 48
4.3.3. Communicating environmentally sustainable practices 48
4.3.4. Linen re-use with influence on choosing a hotel 49

4.3.5. Environmentally friendly products with influence on choosing a hotel 49
4.3.6. Recycling programmes with influence on choosing a hotel 50
4.4. Expectations of ESP compared with Country of Residence..... 51
4.4.1. Internationally recognized environmental certifications with country of residence 51
4.4.2. Green supplier with country of residence 52
4.4.3. Communicating ESP with country of residence 52
4.4.4. Linen re-use with country of residence 53
4.4.5. Environmentally friendly products with country of residence..... 53
4.4.6. Recycling programmes with country of residence..... 54
4.4.7. Willingness to Pay Extra..... 55
4.4.8. Willingness to pay extra..... 55
4.4.9. Percentage willing to pay extra 56
5. Chapter – Hotels/Hotel Chains Environmentally Sustainable Practices 57
6. Chapter – Discussion and Conclusion.....61
6.1. Change in Attitude of the Business Travelers 61
6.2. Influence of Hotel Selection and Willingness to Pay Extra 62
6.2.1. Influence of choosing hotel..... 62
6.2.2. Willingness to pay extra..... 63
6.3. Environmentally Sustainable Practices in Delhi Hotels..... 63
6.4. Implications of this Research 64
6.5. Limitations and Future Research..... 65
7. References 66
8. Apendix 76
8.1. Research Questionnaire..... 78

Table of Figures

Figure 1: Hotel supply chain 20
Figure 2: Hierarchy of environmentally sustainable eco-labels 23
Figure 3: Participant's country of residence 43
Figure 4: Purpose of visit 43
Figure 5: Number of business travelers willing to pay extra 55
Figure 6: Additional amount customers are willing to pay extra as a percentage 56

Table of Tables

Table 1: Number of trips and age 44
Table 2: Relationship between the changes in company's outlook with change in personal outlook towards environmental sustainability in hotels 45
Table 3: Chi-square relationship 45
Table 4: Changes in personal outlook towards environmental sustainability in hotels compared with country of origin 46
Table 5: Changes in company's outlook towards environmental sustainability in hotels compared with country of origin 46
Table 6: Environmental certifications' influence on hotel choice 47
Table 7: Green supplier influence on hotel choice 48
Table 8: The influence of communicating environmental sustainability on hotel choice 48
Table 9: Influence of linen re-use and choosing a hotel in Delhi 49
Table 10: Environmentally friendly products and the influence on hotel choice 49
Table 11: Recycling programmes on hotel choice 50
Table 12: Country of residence in relation to importance of internationally recognized environmental certifications 51
Table 13: Country of residence in relation to importance of green suppliers 52
Table 14: Country of residence in relation to the importance of the communication of ESPs 52
Table 15: Country of residence in relation to the importance of an option for linen re-uses 53
Table 16: Country of residence with environmentally friendly products 53
Table 17: Country of residence on recycling programmes 54
Table 18: Delhi's domestic premium hotels 58
Table 19: Delhi's international premium hotels 58
Table 20: Collective analysis of domestic and international hotel in Delhi 59

List of Abbreviations

AUTEC – AUT Ethics Committee

BS – British Standards

GDP – Gross Domestic Product

EMS – Environmental Management Systems

ES – Environmental Sustainability

ESA – Environmental Sustainability Accreditations

ESP – Environmentally Sustainable Practices

ESS – Environmental Sustainability Standard

FTA – Foreign Tourist Arrival

HVAC – Heating Ventilation and Air Conditioning

IH&RA – International Hotel and Restaurant Association

ISO – International Organization for Standardization

LEED – Leadership in Energy and Environmental Design

NZTRI – New Zealand Tourism Research Institute

ROI – Return on Investment

SD – Sustainable Development

SPSS – Statistical Package of the Social Sciences

STCRC – Sustainable Tourism Cooperative Research Centre

UK – United Kingdom

UN – United Nations

USA – United States of America

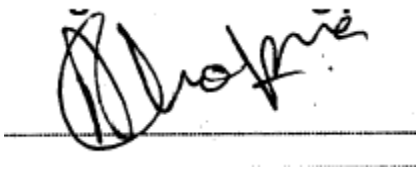
USGBC – United States Green Building Council

WTTC – World Tourism and Travel Council

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously written by another person (except where explicitly defined in the Acknowledgments), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed



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Abstract

The objective of this study is to identify the change in business travelers' attitude towards environmental sustainability (ES) in Delhi's premium hotel (4 and 5 star) since 2007. This research also aims to establish whether a hotel's environmental sustainability practices (ESP) have any influence on the hotel selection by the business traveler. This research builds on the study of Manaktola and Jauhari (2007) that focused on determining the factors influencing the attitude of hotel customers towards ESP's employed by hotels in the National Capital Region (NCR) of India.

This research introduces the concepts of sustainability and ES based on the current literature and its application in the hotel industry. The literature review also discusses hotel supply chain and the eco-labels that are present to audit and verify the ESP's employed by the hotels. A model that explains the hierarchy and the interdependency between different eco-labels has been established.

A quantitative research methodology was adopted and the data collection was completed through the use of snowball sampling and sending online questionnaires to participants (business travelers). The questionnaires were distributed, administered and collected by Qualtrics, an online survey tool. The data was analyzed through the use of cross tabulations and bar graphs derived from SPSS.

The findings indicated a significant change in the participants' attitude towards ES in Delhi hotels and also indicated that 79 per cent of the participants were willing to pay extra for hotels with ESP's. The findings also indicated that the hotel selection is governed by the participants' firm and the company is influenced by the ESP's employed by Delhi hotels.

This study has ascertained that business traveler's knowledge and awareness about ES has enhanced since 2007 hence, providing justification for investment in ESP's by the premium hotels of Delhi which mainly cater to the needs of business travelers.

1. Chapter – Introduction

1.1. Research Background

Hospitality and tourism are more likely to thrive in locations which have an abundance of scenic beauty, history and culture. Sustaining such locations economically, environmentally and socially is essential for a successful destination. Given this, as customers have begun to realize that they have a choice to become more environmentally sustainable consumers the hospitality and tourism industry is being challenged to become more sustainable. This growing awareness has been recognized by the hospitality and tourism operators and is, motivating them to become environmentally sustainable, which in turn also contributes towards the operators being able to save money (Kirk, 1995). Moreover, in the current global climate where countries are attempting to recover from the global economic crisis of 2008, becoming environmentally sustainable is increasingly important (*The Economist*, 2012).

While, financial instability and social issues are important concerns for business leaders, global temperatures rise, weather patterns become increasingly unstable and natural resources are depleted, environmental sustainability (ES) is becoming increasingly important (*The Economist*, 2012). Walsh, (2013) suggests that in order to move towards a sustainable operation, business leaders have to understand and acknowledge the impact of their operations and levels of efficiency being accomplished with regards to the consumption of resources. Nevertheless, for any business the main aim is to have adequate profit margins which require the business to generate higher revenues and reduce expenses (Bohdanowicz, 2005).

With its dependence on the earth's natural resources, the hospitality and tourism industry attracts attention not only from independent customers, but, from external stakeholders such as local authorities who also encourage the industry to become environmentally sustainable (Kirk, 1995). Lim and McAleer, (2005) and Mensah, (2006) further suggest that tourist destinations are dependent on their location's assets to provide for the community hence, placing an effective environmentally sustainable strategy in motion becomes necessary.

1.2. Research Aims

This research presents three aims: the initial two representing business travelers' demand for environmental sustainability in hotels and the third to establish the ESP's adopted by premium hotels (4 and 5 star) in Delhi. The three aims are as follows:-

- To ascertain whether has been any change in the attitude of business travelers towards environmental sustainability since 2007 in Delhi premium hotels.
- To investigate the influence of environmentally sustainable practices integrated by hotels on business travelers' selection of premium hotels, and explore the willingness of the customers to pay extra for environmentally sustainable initiatives.
- To identify the current environmentally sustainable practices integrated by premium hotels in Delhi.

1.3. Research Objective

The objective of this research is to identify whether the business traveler's attitude towards environmental sustainability (ES) has changed since 2007 with regards to premium hotels in Delhi, India. The study also aims to establish whether hotel's environmentally sustainable practices (ESP) influence the purchasing behavior of business traveler or if hotels are chosen simply on the basis of their location and room rates rather than on their environmental credentials.

This research builds on the study conducted by Manaktola and Jauhari in 2007 which focused at determining the factors influencing the attitude of hotel customers towards ESP's employed by hotels in the National Capital Region (NCR) of India. This highlights a research gap which is to identify if there has been any change in the attitude of the hotel customers towards ESP's in hotels since 2007.

1.4. Justification for the Research

In 1987, the United Nations (UN) funded the Brundtland Report, which reported on the fragility of the Earth's ecology and environment. The report identified the impacts of ozone layer depletion, deforestation, climate change and the extinction of flora and fauna,

which highlighted the fragility of the ecology resulting from unsustainable activities over the years (Ekins, 2000). The Brundtland Report also highlighted the importance of maintaining a balance between economic growth, environmental sustainability and societal equality (Hueting, 1990). Resulting from the need for a balance between economic growth, environmental sustainability and social equality, triple bottom line reporting has been recognized as the way of identifying a sustainable entity (Porritt, 2005). Lim and McAleer, (2005) believe that the concept of sustainable development was introduced through the Brundtland Report and also state that, within the broader concept of sustainability, environmental sustainability has become a matter requiring serious attention because environmental sustainability enables economic and social sustainability.

The literature behind sustainable development (SD) infers improving the quality of life whilst simultaneously maintaining the Earth's environment (Porritt, 2005 and Jacob & Chase, 2013). In addition Gossling and Hall, (2006) and Mowforth and Munt, (2009) believe that SD can be achieved by the collective efforts of communities and proficient utilization of the planet's resources'. The Brundtland Report brought awareness and knowledge about the fragility of the planet's eco-system and the importance of its conservation which has resulted in the practices of sustainability and SD becoming more important.

The concept of environmental sustainability (ES) can be expanded, to mean efficiently utilizing the natural resource whilst ensuring its conservation (Goodland, 1995 and Costanza & Patten, 1995). However, as Bohdanowicz, (2005) and Walsh, (2013) both point out, for any business to employ environmentally sustainable practices (ESP) the knowledge of the negative impacts from their daily operations has to first be established.

Moreover, for any business to integrate ES into their operations the presence of a motivating factor is essential. Motivation for employing ESPs' in a business could be partly to meet the demands of customers and partly due to the resulting financial benefits (Bohdanowicz, 2005). Penny, (2007) suggests that companies around the world look to increase their profit margins by employing ESP's which leads to a reduction in the operational costs of the business. Other motivating factors could be to improve market

image (Bohdanowicz, 2005), or pressure from governments' (Asif, Searcy, Garvare & Ahmad, 2011).

It is clear that ES is a significant issue for the hospitality and tourism industry (Gossling & Hall, 2006). Goldstein and Primlani, (2012) stress that due to the reliance on the planet's resources and the impacts of the 2008 global financial crises ES has become a matter of great concern. In addition, to completely integrate ES into a hotel, the supply chain operations are suggested to be environmentally sustainable as well (Sigala, 2008).

Even though, ESP's are enlisted, the controlling and assessing of these practices become necessary. Thus, eco-labels are recognized as voluntary schemes which help hotels to employ ESP's and help customers to choose an environmentally sustainable property (Ayuso, 2006). This research discusses environmental sustainability standards (ESS), environmental management systems (EMS) and environmentally sustainable accreditations (ESA).

This research is presented in the context of the hotel industry in Delhi, India, although, when compared to the research conducted by Manaktola and Jauhari, (2007), the geographic sample was the National Capital Region (NCR), which includes Delhi. However, knowledge of the Indian hospitality and tourism industry will create a better understanding of the market that prevails in this part of the world.

1.5. The Hospitality and Tourism Industry of India

India achieved independence in 1947 and is now the second most populated nation in the world and the tenth largest economy in the world (Kuthiala, 2001 & *The Economic Times*, 2011). India is considered to be the second most attractive country for foreign business investments due to the availability of resources, a competitive market and the ever-increasing demand by customers (*The Economic Times*, 2011).

The Indian economy is fuelled mainly by financial services (25.5 %), chemical manufacturing (9.3 %) and communication services (6.9 %), which are the country's top Gross Domestic Product (GDP) contributors (World Travel and Tourism Council, 2013).

As suggested by Chitravanshi and Lone, (2012) and the World Travel and Tourism Council, (2013), the hospitality and tourism industry contributed 6.4 per cent of the total GDP towards the Indian economy in 2012, ranking it the fourth highest contributor. Additionally, the country witnessed a 5.4 per cent increase in the number of foreign tourist arrivals (FTA) in 2011. Meanwhile, the number of domestic tourists has also increased from 865 million in the year 2011 to 1036 million in the year 2012 (Ministry of Tourism, India, 2013).

However, Krishnan, (2011) points out that in recent years a niche kind of tourist has been attracted towards India, medical tourists. Krishnan, (2011) explains that such tourists are attracted to India because the medical procedures and facilities in the country are of a high standard yet are considerably more inexpensive than elsewhere in the world. This research, however, focuses on the Indian (and Delhi's in particular) hotel industry.

1.6. India's Hotel Industry

Hotels are premises that provide comfort and services for relaxation and rejuvenation for its customers (Sloan, Legrand & Chen, 2009). Chitravanshi and Lone, (2012) estimate that in the coming five years, India will witness a 143 per cent increase in the number of new hotel rooms from international and domestic hotel chains. Justifying the importance of ESP in existing and new hotel while, making the industry vital to the Indian economy by offering employment and providing accommodation facilities to the increasing influx of travelers.

As noted by Stoicef, (2010) the Indian government has declared the hotel industry as a high priority sector encouraging investment from foreign and domestic hotel chains. Coupled with that, capital expenditure will also be offered to investors by the local authorities as cited by Raghavan, (2010).

According to Goldstein and Primlani, (2012) environmental sustainability in hotels has risen to become a great concern for hoteliers around the world. Currently, the Indian hotel sector is witnessing a foray of international hotel chains entering the market, bringing their knowledge and practices for becoming environmentally sustainable (Jauhari, 2008 and Chitravanshi & Lone, 2012). However, certain hotels in India are already employing

ESP's as their commitment towards making the premise environmentally sustainable, for instance, The Orchid Five Star Ecotel Hotel, Mumbai (Jones, 2002) and the ITC hotel group (Chitravanshi & Lone, 2012). In contrast, certain hotels in India are integrating ESPs mainly because of the financial benefits that follow, such as the Hilton Group has experienced (Chitravanshi & Lone, 2012).

In conclusion, the Indian hotel industry possesses great opportunity for growth due to the help provided by the government, demand from customers and market conditions. This suggests that all new hotels should introduce ESP's into their properties as with the aforementioned hotels, allowing them a competitive edge and improved financial outcomes.

1.7. Delhi's Hotel Industry

The location for the research is Delhi also known as New Delhi, which is the capital city of India. Delhi is home to the Indian parliament alongwith, governmental bodies. Delhi's importance as a tourist hub has grown as it played host to the 2010 Commonwealth Games, the Cricket World Cup and was recently added to the Formula 1 calendar (Delhi Tourism, 2013). On the basis of foreign tourist arrivals (FTA), Delhi has been ranked as the third most visited city in the country and also enjoys three world heritage monuments: Qutub Minar, Red Fort and Humayun's Tomb (Ministry of Tourism, India, 2012).

Delhi welcomed 1.81 million international tourists' (USA – 24% and UK – 7%) and 21.63 million domestic tourists dated June, 2010 (Ministry of Tourism, India, 2012). Around 90 per cent of foreign tourists' and 39 per cent of domestic tourists visited Delhi for the purpose of business out of which 90 per cent of foreign tourists and 41 per cent of domestic tourists' opted to stay in premium hotels (4 and 5 star) in Delhi (Ministry of Tourism, India, 2012). To cater to the accommodation needs of these corporate customers, Delhi has 27 premium hotels (Ministry of Tourism, India, 2012) however; integration of ESPs may not be the choice for every hotel operator.

1.8. Structure of the Dissertation

The second chapter focuses on the literature review, covering concepts of sustainability, environmental sustainability, and environmental sustainability in business, the hospitality and tourism industry, and the hotel industry. The literature review chapter also provides discussions on hotel supply chain, environmental sustainability standards, systems and accreditations with the following sub themes: ESS, EMS and ESA.

Chapter Three is dedicated to the methodology of this dissertation, pointing out the research paradigm opted for this research as well as the ontological and epistemological bases. The methodology chapter explains data collection techniques and the problems faced during the data collection process. The chapter also elaborates on the data analysis methods, ethical considerations and the limitations of this research.

Chapter Four elaborates on the findings suggesting that there has been a change in the attitude of business travelers towards ES in Delhi hotels, with these customers willing to pay extra for ESP's.

Chapter Five provides an insight into the premium hotels in Delhi and their ESP's. This chapter hints that the international hotels/ hotel chains have a higher inclination towards the integration of ESP's.

Chapter Six provides the discussion and conclusion for this research alongwith, a summary of its limitations and suggestions for future research.

The research concludes with a reference list and the appendices for this research.

2. Chapter – Literature Review

2.1. Introduction

The aim of this research is to understand the attitudes and perspectives of business travelers' visiting Delhi hotels towards environmental sustainability (ES) in hotels, and also to investigate if any change can be witnessed in their attitudes since 2007. This research also aims to understand the influences of environmentally sustainable practices (ESP) have on business travelers' and whether they are willing to pay extra for these practices. Finally, this research aims to establish the current ESP's employed by hotels in Delhi.

The discussion in this literature review elaborates on sustainability in general and then explains environmental sustainability specifically, in a business, the hospitality and tourism industry, and, finally, in the hotel industry. The focus of the section then shifts towards the supply chain of hotels and, through research, highlights the importance of this operation and justifies the reason for employing ESP's. The literature review moves on to creating an understanding of certain ES focused standards, systems and accreditations.

2.2. Sustainability

The concept of sustainability in general is explained through the research conducted by academics. This section also highlights the concepts of sustainable development and triple bottom line reporting, mentioning the importance of these concepts to sustainability.

Economics Noble laureate Solow (1993) describes sustainability as a vague theory that involves resources and their efficient utilization. However, resources are not just limited to natural resources or the environment, but, also include social and economic resources (Solow, 1995). Sustainability has been defined by Porritt, (2005) as the present generations' ability to consume and conserve resources for meeting their needs without jeopardizing the future generation's ability to accomplish the same.

An elementary meaning of sustainability has been noted by Ekins, (2000) who suggests it means the capability of the planet's resources to exist indefinitely into the future. Filho, (2000) adds further that, sustainability should be viewed as a process to follow and a goal to accomplish.

Solow, (1992) believes that sustainability constitutes an obligation to ensure manufacturing capital, physical/natural capital and human/social capital are maintained and equally distributed between the present and future generations. These three capitals can be identified as economic, environmental and social capitals and they make up what is referred to as triple bottom line reporting (Ekins, 2000). According to Porritt, (2005), triple bottom line reporting is the actions taken by companies which not only financially benefit the company but, simultaneously, benefit society and the environment. The three variables of triple bottom line reporting are interlinked and interdependent plus, lay foundations for businesses to introduce sustainable development (Filho, 2000, Goodman, 2000, Porritt, 2005, Weaver, 2006 and Mowforth & Munt, 2009).

The term 'sustainable development' (SD) is defined by Porritt, (2005) and Jacobs and Chase, (2013) as a process where human beings improve their quality of life while simultaneously, maintaining and preserving the Earth's environment. Mowforth and Munt, (2009) consider SD as a process of ensuring optimal utilization of resources, but, they also assert that, in order to achieve this goal, communities have to participate and be committed towards becoming sustainable as well. Weaver, (2006) elaborates on SD as, continuous economic development without straining the environmental, social, economic or cultural aspects of the planet. Gossling and Hall, (2006) have determined that SD is possible through partnerships between governments, businesses and communities. The motivation for any organization to become sustainable is driven either by the expectation of the stakeholders or the financial benefits for the organization (Manaktola and Jauhari, 2007 & Penny, 2007).

To conclude, sustainability is viewed differently by academics however, optimal utilization of resources by present and future generations has been indicated as a common theme. Sustainability has been identified as both an activity (Filho, 2000) and an obligation (Solow, 1992).

Alongside this, the concept of triple bottom line reporting was introduced pointing to three variables i.e. economic, environmental and social capitals, which are required to be made sustainable for any business to claim them as a sustainable entity. With the aim of making the triple bottom line sustainable the discussion weaves into sustainable development which talks about the importance of resource utilization that is aligned with the notion of sustainability. Moreover, sustainable development also stresses upon the improvement of communities and conservation of the environment and suggests that sustainability can be categorized as economic sustainability, environmental sustainability and social sustainability. In the case of this research, the focus will be on environmental sustainability in Delhi's hotel industry.

2.3. Environmental Sustainability

The concept of environmental sustainability (ES) is the main focus of this section. With the help of academic interpretations of this concept a comprehensive understanding of ES is achieved.

Goodland, (1995) explains environmental sustainability as a way to conserve the environment while, understanding and ensuring human welfare and reducing the damage caused through uncontrolled and excessive usage of resources. Another definition of ES has been provided by Costanza and Patten, (1995) who suggest that ES is about avoiding ecological extinction while, surviving and growing. Ekins, (2000) describes ES as initiatives which not only contribute towards economic sustainability, but, also aim to conserve natural resources and monitor their consumption.

Goodland and Daly, (1996) state that humans should mould themselves to live with certain limitations and respect the environment as a provider for their survival. Although, as Luchsinger, (2009) notes, restricting the usage of resources alone will not lead to ES, different measures such as optimizing the application of a resource and controlling pollution are also essential.

In 1987, the United Nations (UN) funded the Brundtland Report, which reported on the fragility of the Earth's ecology and environment. With the help of illustrations of adverse impacts, such as ozone layer depletion, deforestation, climate change and extinction of flora and fauna, Ekins, (2000) affirms the fragility of the ecology and the adverse impacts from unsustainable activities over the years. The need for ensuring ES has become important because over the years as the population of the planet grows, the utilization of resources also rises due to the ever-increasing demand for a more comfortable life style (Hueting, 1990).

To conclude, ES can be achieved by limiting human usage of resources (Goodland, 1995) as well as from individual initiatives undertaken by businesses (Bohdanowicz, 2005). All in all, ES can be achieved when businesses and all involving entities work in harmony while acknowledging the value of the planet's resources and feeling the need to be responsible, unearthing more sustainable resources and practices.

2.4. Environmental Sustainability in Business

The discussion revolves around the recognition by businesses towards the need for environmental sustainability (ES). This section also indicates the factors which encourage companies to employ environmentally sustainable practices (ESP). This section introduces the environmentally sustainable standards, systems and accreditations that are in place to monitor the efficiency of the practices integrated by businesses around the world.

As Penny, (2007) and Carmody and Zeppel, (2009) emphasize, the reason behind businesses undertaking sustainable initiatives is, partly due to the demands made by the customers and partly due to the economic benefits that are obtained. On the other hand, according to Asif et al., (2011), businesses incorporate ESP into their operations due to the pressure asserted by government, local authorities or the community. However, Bohdanowicz, (2005) and Walsh (2013) believe that, before integrating ESP into any business the damage caused by their processes has to be identified in order to mitigate the effects.

Asif et al., (2011) cite ES in businesses as a pre-requisite to corporate sustainability. This suggests that companies should be involved in developing processes and systems which will allow the firm to anticipate their customers' needs and accomplish them with the least possible environmental impact and, simultaneously, conserving for the future generations (Asif et al., 2011). On the other hand, a much more conventional view by Kasim, (2006) and Luchsinger, (2009) is that any company which sources raw materials locally, educates customers of the ESP being employed, ensures products are ethically manufactured, and, finally, acknowledges the impact on the environment through their operations can be identified as an environmentally sustainable firm. Moreover, Kasim, (2006) states that in order to achieve ES in a business; there is a need to have a combination of ESP.

A more obvious aspect of ES in business has been established by Penny (2007) ,who explains that for any company to employ ESPs it is advantageous, as the operational costs tend to be reduced due to the efficient practices employed and consequently, leads to increased profitability of the organization (Penny, 2007). Another benefit of employing ESP in any business is the improved market image and value of the company (Bohdanowicz, 2005).

Even though ES in a business has its advantages by providing higher profit margins through cost reductions (Penny, 2007) and better competitive advantage due to improved market image (Bohdanowicz, 2005), there are still skeptics around integration of ES. As Rondinelli and Vastag, (2000) note, employing ESPs requires some structural alterations and changes in the company's operations and structure which could be challenging and costly. They suggest this is why many companies choose not to become environmentally sustainable (Rondinelli and Vastag, 2000).

Nevertheless, with companies opting to become environmentally sustainable due to several benefits (Penny, 2007 & Woodruff and Mankoff, 2009), certain control measures and standards are necessary, in other words proper stewardship is in order. To continue being an environmentally sustainable company, constant regulation, development and upgrading of practices are vital to ensure acceptable norms are being adhered to (Kasim, 2006 & Luchsinger, 2009). This need led to the formation of ES oriented standards, systems and accreditations.

For instance; British Standards (BS) 7750 is an example of an environmental sustainability oriented standard (Kirk, 1995), Environmental Management Systems (EMS) ISO-14001 is an ES oriented system (Kirk, 1995), and third party organizations perform regular audits and provide accreditations (ESA) for being environmentally sustainable such as Green Globe 21 (Carmody & Zeppel, 2009). The aforementioned standards, systems and accreditations are different from one another in nature, and will be further discussed later in the research.

In conclusion, ES in business is referred to as an integral part of corporate sustainability by Asif et al., (2011) and highlights the manner in which businesses can contribute towards this concept, resulting in, economic benefits and strengthening the market image of the company (Bohdanowicz, 2005 & Penny, 2007). The motivation for companies to employ ESP comes through the expectations imposed by the local authorities, the customers and the financial advantages that follow. Furthermore, with companies employing ESP, the presence of standards, systems and accreditations seems essential as these help companies to benchmark their initiatives, and to compare and develop more efficient ways to utilize their resources.

2.5. Environmental Sustainability in the Hospitality and Tourism Industry

The hospitality and tourism industry's recognition of environmental sustainability (ES) is the focus of this section which highlights the importance of a destination's perceived image and the need for sustaining that for the benefit of not just the business but, the society as well. An insight has also been provided into the perception of the hospitality and tourism business owners towards ES.

Tourism can be defined as the movement of people to foreign locations for the purpose of business, recreation or leisure (Brebbia & Pineda, 2010). Tourism, as defined by Collier (2006), involves people travelling away from their usual habitat for purposes, such as leisure, or business. In addition, as stated by Page, (2011) the tourism industry is defined by the consumption made by the tourists.

Moreover, tourism in many countries is one of the highest income generators, thus, implying the importance of the industry's aim to become environmentally sustainable (Weaver, 2006). The hospitality and tourism industry has become one of the world's largest industries with a large number of buyers and sellers, 1.035 billion international tourist movements were recorded in the year 2012 (WTO, 2013).

Yet, there are adverse environmental impacts from this sector which at times are either underestimated or go unnoticed (Tzschentke, Kirk & Lynch, 2008). Gossling, (2002) suggests that tourist movement imposes a direct and indirect threat on the ecology of any destination. Moreover, Gossling and Hall, (2006) note that the hospitality and tourism industry tends to have a high dependency on the natural resources of a destination for their attractiveness. The environmental impacts of the hospitality and tourism industry as suggested by Richards and Hall, (2000) are local such as increased noise pollution, higher effluent discharge and increased levels of air pollutants.

Environmental sustainability in the hospitality and tourism industry, according to Mensah, (2007) and Brau, Lanza, and Usai, (2008) infers that, using the resources whilst simultaneously, regulating their application in order to prevent any shortage, pollution or depletion of the resources, can be availed by future generations for promoting tourism. On the other hand, the concept of ES within the tourism industry has been described by Meade and Monaco, (2001) as the synchronized achievement of economic objectives and environmental protection goals for countries with high tourism dependency.

A pessimistic outlook of hospitality and tourism operators regarding ESP has been identified by Hobson and Essex, (2001) in Plymouth, UK, by Mensah, (2007) in the greater Accra region in Ghana and Tzschentke et al., (2008) in Scotland. Kasim, (2007) notes that some destinations have seasonal tourist periods, which serves to discourage hospitality and tourism operators from investing in ESPs. Furthermore, some hospitality and tourism operators believe that ES within the industry would be dysfunctional and impractical, with high investment required and a very poor return on investment (ROI) (Hobson & Essex, 2001).

Nonetheless, initiatives have been undertaken by hospitality and tourism operators around the world in the wake of protecting the environment such as that employed by ITC Hotel

Limited that uses solar thermal systems for the purposes of heating water in the entire hotel (Krishnamurthy & Jalnawalla, 2012). Another initiative that has been undertaken by the accommodation sector is, investing in energy-saving equipment, such as compact fluorescent lights (CFL's) in the entire premises, and efficient water and waste management (Meade and Monaco, 2001 & Kaul and Gupta, 2009). Another suggestion for ensuring ES is integrated into this industry is through increasing awareness and educating not just the customers but, also the employees and the local community regarding the adverse impacts on the environment and remedial approaches to be undertaken (Mensah, 2007 & Kaul and Gupta, 2009).

Alongside this, environmental sustainability standards, systems and accreditations presented by institutions such as Green Globe 21 or EarthCheck can improve the opportunity for tourist sites with regards to their conservation (Mensah, 2007). Environmental management system's (EMS) for example ISO-14001 would also provide relevant information to managers and owners regarding the negative environmental impact of their operations allowing corrective actions to be undertaken (Meade and Monaco, 2001 & Tzschentke et al., 2008).

Finally, this section discussed ES in the hospitality and tourism industry by defining the importance of this industry for certain countries and the necessity of maintaining the destination's purity. As it has been pointed out, the industry's dependence on natural resources is high, and so having environmentally sustainable strategies in place is imperative. However, hospitality and tourism business owners are skeptical regarding ES in the industry as providing low ROI. Nevertheless, initiatives as simple as installing energy-saving electrical fittings are listed, as well as others which require low investment. These initiatives would benefit the destination when constantly monitored and updated with inputs from the ES standards, systems and accreditations.

2.6. Environmental Sustainability in Hotels

Environmental sustainability (ES) as integrated into the hotel industry is discussed in this section which details the importance of the hotel sector to the hospitality and tourism industry, thus, pointing out the importance of environmentally sustainable practices (ESP). Furthermore, this section will discuss the influence of the awareness levels of the hotel's management on the integration of ESP's. Finally, with the help of an illustration, this section suggests practices hotels can employ to accomplish ES.

The accommodation sector is an integral part of the tourism industry. Hotels are certainly the most extravagant, for the reason that hotels not only provide comfortable accommodation but, also offer an array of facilities and services where customers can indulge themselves in relaxation and rejuvenation (Sloan et al., 2009). In order to provide customers with such facilities, resources' are put to optimum use by the hotel management, which prompts the question, as to whether the utilization of these resources is leading to their depletion, and whether future generations will be able to provide their customers with similar luxuries.

Brown, (1996) and Bader, (2005) agree that due to the nature of the hotel business, management should ensure that operations are run following environmentally sustainable norms. As a result, Goldstein and Primlani, (2012) have noted that ES has become one of the fastest-growing concerns for the global hotel industry as this sector depends on the destination's resources.

Southan, (2010) states that hoteliers around the world should be educated and made aware of the negative impacts their operations have on the local environment, and, that demand for greener or environmentally sustainable products and services comes from their customers' as well. In addition, Bohdanowicz, (2006) points out that the reduction in operational costs also acts as an important motivator for integration of ESP in hotels, along with governments and local authorities' enforcing the same.

Moreover, Bohdanowicz, (2005) reports that, the awareness and knowledge about environmental impacts and sustainable practices that a hotel owner and manager have can be influenced by the size of the company.

To further elaborate, if premises are part of a hotel chain, integrating ESPs becomes necessary as that justifies the company's triple bottom line. On the other hand, in the case of an independent property, such obligations are not vital to fulfill (Bohdanowicz, 2005). Furthermore, the attitude and extent of awareness and knowledge the management has determines the level of commitment towards being an environmentally sustainable business (Bader, 2005 & Bohdanowicz, 2005).

Acknowledgement by hoteliers regarding the negative environmental impacts hotels are generating has led to the creation of standards, systems and accreditations. Organizations like HVS Global Hospitality Services have created a computer-based programme called ECOTEL (Mann & Thadani, 2010). This allows the hotel's management to monitor the premises' carbon footprint, conduct regular audits to highlight gaps, and suggests ways to enhance the hotel's operational efficiency, making the environmental sustainability targets more achievable (Kasim, 2007 & Mann and Thadani, 2010). EMS's, such as ISO 14001 can also be tailored or hotels that allow the management to synchronize with other management systems and quality management modules (Sebhatu & Enquist, 2007).

In a study conducted by Jones, (2002) The Orchid Five Star Ecotel Hotel, situated in Mumbai, India, provides an example of a hotel that has incorporated ES into its facility as suggested by Penny, (2007). The Orchid Hotel has been constructed using environmentally sound building materials. Moreover, the hotel has been designed in a way that natural light allows illumination of the lobby area, while, at night energy-saving lamps have been installed which require less electricity consumption to operate, brightening up an area equivalent to that formerly lit by a traditional bulb (Jones, 2002).

Together with that, the Orchid Hotel has also invested in water conservation and waste management techniques in order to reduce their carbon footprint. An air pollution control mechanism has also been installed where air scrubbers' stop carbon dioxide from entering the atmosphere through the chimney's (Jones, 2002). Another technique that the Orchid Hotel employs to ensure its environmental objectives are met is a technique highlighted by Goodman (2000), which emphasizes employee training and education on ES.

Jones, (2002) notes that at the Orchid Hotel, a 'green team' has been setup consisting of hotel employees from different departments who are responsible for providing education

and training, thus, making the hotel employees aware and knowledgeable about the environmental impact of their actions. Lastly, as Jones, (2002) mentions the Orchid Hotel also ensures the ES of its supply chain, which is an initiative suggested by Sigala, (2008) as important for any hotel aiming for ES.

To conclude, this section highlights the importance of the hotel industry to a consumer's visit to any destination, therefore, justifying the point that ES in hotels is a major concern and should be viewed as an obligation. However, the knowledge and awareness of the hotel owner and manager can either benefit or hinder this obligation as ES can be viewed with skepticism as mentioned in the previous section. Nevertheless, the Orchid Hotel in Mumbai employs ESP's to its daily activities, all of which have been listed by academics as ways to achieve ES (Jones, 2002). This suggests that any business or industry can employ ESPs once the impact of their daily activities has been established and remedial actions have been strategized.

2.7. Supply Chain

Complete and authentic environmental sustainability (ES) requires not only an onsite response by a hospitality and tourism company, but, it involves the supply chain of the company to be equally environmentally sustainable (Sigala, 2008). This section provides an insight into the subject of supply chain which is explained by Zhang, Song, and Huang, (2009) and Jacobs and Chase, (2013) as the backward and forward movement of raw materials and/ or information from the producer to the provider.

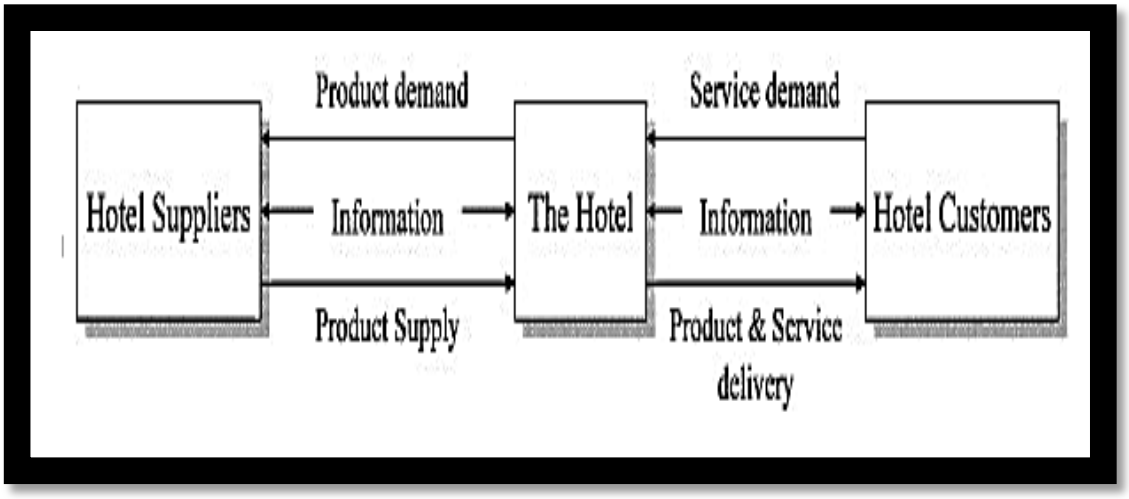
The reason for ensuring a green supply chain arises due to the increasing awareness of the hotel guests with regards to the procurement of the raw material (Manaktola & Jauhari, 2007 and Sigala 2008). This section also discusses concepts of supply chain and provides reasons for businesses to ensure an operation's ES. The discussion will be focused on the supply chain of a hotel and, with the help of a diagram; the workings of an environmentally sustainable supply chain will be established. Lastly, this section will also shed some light on the techniques that can be employed to ensure an environmentally sustainable supply chain is adhered to.

Preuss, (2005) asserts that in the current climate with ever-increasing demand for tangible and intangible goods, the supply chain's importance is on a par with business fundamentals, such as product development and marketing. Also, Preuss, (2005) and Jacobs and Chase, (2013) believe that with an efficient supply chain operation, an organization's profitability can increase as it has a direct impact on the costs and sales of their products or services. This resulted in the emergence of a theory called Supply Chain Management (SCM). Behera, (2009) clarifies SCM as tactics employed to ensure the products are manufactured in prerequisite quantities followed by their distribution to the right location in a timely manner while, accomplishing customer satisfaction and cost proficiency. According to Higley, (2004) and Huang, Song, Huang and Lou, (2012) SCM is the management of the product's life from a raw material, to its production followed by the distribution, storage, retailing and finally, the products use and disposal.

Zhang et al., 2009, Huang, et al., (2012 and Song, (2012) introduced a concept that revolves around the supply chain for the hospitality and tourism industry known as tourism supply chain management. This concept, concerns the techniques applied to efficiently utilize and manage the supply chain for a specific tourist's destination in order to satisfy the customer's needs and accomplish the organizational objectives (Zhang et al., 2009 & Song, 2012).

According to Manaktola and Jauhari, (2007) in order to be considered a "green corporation", accommodation operators have to ensure that along with their on-site operations; their supply chain operations are also environmentally sustainable. Additionally, Sigala, (2008) suggests that hotel owners and managers should strategize towards making their forward and backward supply chain linkages environmentally sustainable. To elaborate further, an environmentally sustainable forward supply chain linkage can be referred to as the procurement of raw materials through suppliers, employing ESP into their operations, for example, sourcing vegetables from local farmers (Kothari, Hu and Roehl, 2005 & Behera, 2009). The diagram below has been adopted by Kothari et al., (2005) and depicts the supply chain linkages of a hotel and highlights the flow of information between all the entities involved.

Figure 1: Hotel supply chain



Source: Adopted to hotel sector from Kothari et al., (2005)

As Sigala, (2008) emphasizes, for any hospitality and tourism organization wishing to become an environmentally sustainable business, it is of vital importance that their supply chain operations to be environmentally sustainable as well. With the concept of ES incorporated into this diagram, the process would seem close to the following: the hotel should opt to source its raw materials from environmentally sustainable suppliers by sending a purchase order, demanding resources according to customer demand which would avoid any over stocking or piling of raw material. On procurement of the resource, the hotel would ensure optimal utilization of the raw material whilst, ensuring that, if any wastage occurs, it be disposed of considering the environmental impact. Simultaneously, the delivery of the product or service should be completed under strict environmental guidelines. To conclude, the hotel would have managed to fulfill customer demand without imposing any threat on the environment resulting in a satisfied customer and an environmentally sustainable company. Although, the aforementioned is merely the process, certain initiatives have to be undertaken making both the linkages equally environmentally sustainable (Kothari et al., 2005).

More initiatives have also been outlined with the help of which hotel managers can ensure that their supply chain is environmentally sustainable. An initiative outlined by Kothari et al., (2005) is an electronic system of supply chain called e-Procurement.

This system allows the hotel to choose a seller offering the best possible price for products and encourages managers to order in limited numbers allowing reduction in wastage and overstocking hence, keeping the costs and the impact on the environment low (Kothari et al., 2005). Alternatively, a practice that Behera, (2009) suggests is employed by automobile manufacturers and is known as Just in Time (J.I.T). This technique enables managers to stock raw materials which are aligned with the anticipated demand. Another initiative has been pointed out by Jacobs and Chase, (2013) who proclaim that any business which focuses on having an environmentally sustainable supply chain should conduct a 'cradle – to – grave' assessment of their required resources. This method allows management to determine the production, distribution and disposal cost of their raw materials as these collectively constitute to the actual environmental cost of the raw material (Jacob & Chase, 2013).

Another initiative is the concept of 'green multiplier', the fundamentals of which are very similar to that of green sourcing (Preuss, 2005). This concept suggests that, in the case of a hotel whose objective is to be environmentally sustainable property, business should be done with a supplier which has the same attributes i.e. one who aspires to be an environmentally sustainable firm or which is willing to employ those attributes in their daily operations. This approach has two advantages firstly, this makes the hotel's supply chain environmentally sustainable, and secondly, the hotel has educated its stakeholders thus, spreading awareness of the concept (Preuss, 2005).

In conclusion, the concept of supply chain incorporates the movement of goods and information among the manufacturer, supplier, seller and customer (Preuss, 2005, Zhang et al., 2009, Huang et al., 2012 & Jacob and Chase, 2013). The management of this operation is named supply chain management and deals with accomplishing the goal of ensuring delivery of goods in a timely manner, resulting in satisfied customers and cost proficiency (Higley, 2004 & Behera, 2009). Figure 1, depicts the supply chain of a hotel and elaborates with the introduction of ES. As having an environmentally sustainable supply chain has been cited important (Sigala, 2008) and in order to achieve that initiatives are listed.

However, ‘green multiplier’ seems the most appropriate for the hospitality industry as this not only encourages its supplier to be environmentally sustainable, but, also educates suppliers and other tourism intermediaries as well.

2.8. Environmental Sustainability Standards, Systems and Accreditations

Environmental sustainability (ES) has many levels, beginning with simple practices (ESP) like water conservation techniques, next to standards which use criteria (ESS) to allow full integration of systems (EMS). Finally, to full accreditations (ESA), which are based on the standards and systems. The focus is directed towards understanding the relationship between each of these levels, seen in a diagrammatical representation. This section also provides an insight into BS-7750 (standard), ISO-14001 (system), LEED, EarthCheck and Green Globe 21 (accreditations).

Even though, ESP is undertaken by firms towards a noble cause, appropriate stewardship of these ESP’s is essential. As suggested by Luchsinger, (2009) stewarding committees are essential because they ensure the ESPs undertaken by companies are easily communicable to their customers and recognize the link between the economy, society and the environment. Further, Tzschentke, Kirk, and Lynch, (2004) note that, standardizing ESP’s allows for improved market value of an organization, enhances the operational proficiency, intensifies the competitive advantage over rivals and lastly, satisfies all the stakeholders.

Sloan et al., (2009) suggest that a collection of standardized environmentally sustainable practices enlisted by third party organizations be called ‘Eco-labels’. An eco-label is a voluntary scheme which aims to aid companies develop and integrate ESP and allows a customer to choose any hotel that has environmental sustainability attributes (Ayuso, 2006, Luchsinger, 2009 & Sloan et al., 2009). Currently, there are numerous eco-labels in the form of standards, systems and accreditations, which will be discussed and, with the help of Figure 2; hierarchy of standards, systems and accreditations will be established.

Figure 2: Hierarchy of environmentally sustainable eco-labels

Figure 2 illustrates that ESS are the most rudimentary kind of ESP-verifying means. As Richards and Hall, (2000) have identified, ESS's are the guidelines and actions laid down for organization's aspiring to become environmentally sustainable. Besides, ESSs act as foundations for an environmental management system (EMS), allowing the system to outline environmental objectives for the organization to accomplish (Bohoris & O'Mahony, 1994). As Ayuso, (2007) explains, any company aiming for environmentally sustainable operations must have set environmental sustainability standards (ESS) as basis reason being, the same standards will be a specification for the EMS and also fulfill the criterion for any environmental sustainability accreditation (ESA).

Progressing higher up in the hierarchy, environmental management system (EMS) is the next variable. EMS's provide a benchmark for hospitality and tourism operators to compare the effects of their ESP on their business, surrounding community and the environment (Ayuso, 2007 and Sloan et al., 2009).

As Kirk, (1995), Tzschentke et al., (2004) and Chan, (2009) note, ESS is to be prioritized before integrating EMS's into an organization. However, as suggested by Holt, (1998),

Lopez-Fernandez and Serrano-Bedia. (2007) and Chan, (2009), ISO – 14001 is also an environmental sustainability standard as it succeeded BS-7750 in 1996 (Holt, 1998) and also acts as an accreditation for hotels (Chan, 2009).

Finally, environmental sustainability accreditations (ESA) are the next variable of the hierarchy. ESA's are third party audit's performed by organizations such as Green Globe 21 or EarthCheck that provide accreditations after confirming a business's integration of standards and systems as a means of accomplishing, standardizing and verifying their ESP's (Tzschentke et al., 2004 & Sloan et al., 2009). In other words, ESA's are built onto the EMS and ESS as requirements (Sloan et al., 2009).

The Accor hotel group as an example has created a bespoke environmental sustainability management programmes Planet 21, this not only provides guidelines to ensure an environmentally sustainable hotel operation, but, also helps with sustainable development of the hotel group (Accor, 2013).

At present there are many standards, systems and accreditations which hospitality and tourism companies can attain such as ECOTEL (Mann and Thadani, 2010), Green Tourism Business Scheme (GTBS) (Tzschentke et al., 2004), Eco-Management and Audit Scheme (EMAS) (Bohdanowicz, 2005) and Qualmark of New Zealand (Qualmark, 2012). For this literature review BS-7750, EMS (ISO-14001), LEEDS, EarthCheck and Green Globe 21 will be discussed.

2.8.1. Environmental Sustainability Standards (ESS) - BS – 7750

In the year 1992, the British Standards Institution introduced the British Standards (BS) – 7750. This was the world's very first environmental management standard as claimed by Holt, (1998). The aim of this standard was to aid companies become environmentally sustainable by enlisting practices, policies and targets. BS – 7750 was also a specification for the environmental management systems, such as EMAS (Bohoris and O'Mahony, 1994, Mason, 1994 and Holt, 1998).

According to Holt, (1998) the BS – 7750 was conceptualized by the combination of total quality management and the theory of environmental management.

Nonetheless, the BS – 7750 does require organizations' to comply with certain requisites. As Christensen and Nielsen, (1997) point out, the environmental regulations listed have to be accurately adhered to, along with, constant monitoring and improvement to ensure accomplishment of the environmental objectives. The environmental objectives that are laid down should be achievable and easily quantifiable (Christensen & Nielsen, 1997). Another heavily stressed requisite is the ease of communication of the environmental policies employed by the company to all the stakeholders (Bohoris and O'Mahony, 1994 & Christensen and Nielsen, 1997). The third requisite listed is the involvement of the workforce to ensure the environmental objectives are achieved efficiently, enhancing motivation of the employees resulting in higher job satisfaction and a sound triple bottom line (Bohoris & O'Mahony, 1994).

However, in September 1996, BS – 7750 was withdrawn and companies which followed the guidelines of this standard were transferred to ISO – 14001 through the incorporation of changes in the daily operations and completing a paper-based training (Holt, 1998). Furthermore, the reason for BS – 7750's withdrawal was due to the restricted geographic range of the standard within Europe as noted by Holt, (1998). Furthermore, the ISO – 14001 succeeded BS – 7750 because the system did not indicate the company's negative environmental impacts and BS – 7750 did not accurately highlight the level of pollutants being released through the organizations daily operations (Christensen and Nielsen, 1997 & Holt, 1998). With the ISO – 14001 companies around the world can standardize their daily operations towards environmental sustainability (Melnyk, Sroufe and Calantone, 2003).

2.8.2. Environmental Management System (EMS)

An environmental management system, as defined by Meade and Monaco, (2001) is a system comprising of environmental programmes which are integrated into organizational management systems and aimed at making an organization's daily operations environmentally sustainable. Chan, (2009) describes, EMS's as systems which educate managers to implement practices by setting objectives and policies and, conduct regular audits of those prescribed actions. Sebhatu and Enquist, (2007) have established that

EMS's have the ability of systematically supporting companies to manage both their short term and long term impacts on the environment through their products and processes.

Chan, (2009) and Rodriguez-Anton, Alonso-Almeida, Celemin and Rubio, (2012) affirm that EMS's have, over the years gained popularity in the hotel industry to allow hoteliers to reduce their impact on the environment. Finally, as emphasized by Walker, Pitt and Thakur, (2007) implementation of EMS's into a company is considered one of the best ways to improve environmental sustainability. Psomas, Fotopoulos, and Kafetzopoulos, (2011) remind, that integrating an EMS into any organization is a voluntary decisions taken by the management.

There are different forms of EMS's, all varying with regards to their capacity for reducing environmental impact through organizational processes, however, as agreed by Lopez-Fernandez and Serrano-Bedia, (2007), Sebhatu and Enquist, (2007) and Chan, (2009) International Organization for Standardization (ISO) 14001 or ISO – 14001 is the most integrated EMS around the globe.

This system was introduced in 1996 and from then until 2006, six hundred hospitality companies invested in the system (Chan, 2009). Also, as pointed out by Sebhatu and Enquist, (2007) and Chan, (2009) there are around 110,000 companies in other industries which invested in the ISO – 14001 before 2005. In addition, Sebhatu and Enquist, (2007) and Walker et al., (2007) recommend that EMS should be integrated along with quality standard systems as this allows value creation, proficiency in resource usage, and avoids conflict of procedures and results to stakeholder satisfaction.

Until now, this section has introduced EMS and shown ISO – 14001 to be one of the most recognized EMS's, justified by the figures mentioned above however, the following paragraph focuses on the nature and benefits of EMS's.

As noted by Lopez-Fernandez and Serrano-Bedia, (2007) the nature of EMS is such that in order to result in a fruitful investment, certain changes or amendments have to be made in the organization and its processes. Organizational change has been suggested by Lopez-Fernandez and Serrano-Bedia, (2007), Sebhatu and Enquist, (2007) and Rodriguez-Anton et al., (2012) for meeting the environmental standards set by the system for example decentralization.

In order to benefit from the technology, Rondinelli and Vastag, (2000) point out that making the processes and systems clear to all the employees should be prioritized and also managers should monitor the level of adherence to these procedures. Furthermore, as agreed by Rondinelli and Vastag, (2000) and Walker et al., (2007) constant training and awareness-building of the employees is essential in order to meet the environmental objectives set by the EMS. Lastly, a measure that has been strongly recommended by academics is, that EMS should be monitored and updated at continuous intervals in order to keep it on a par with latest trends and practices in achievement of environmental sustainability (Rondinelli and Vastag, 2000, Lopez-Fernandez and Serrano-Bedia, 2007, Sebhatu and Enquist, 2007, Walker et al., 2007, Chan, 2009 & Rodriguez-Anton et al., 2012)

Even though changes and amendments are implemented, there are certain limitations with this system. Rondinelli and Vastag, (2000) have criticized EMS's for not defining the actual level of environmental sustainability being accomplished by the company. Lopez-Fernandez and Serrano-Bedia, (2007) maintain that the results from the EMS are influenced by the local culture and authorities. Another limitation that has been agreed and highlighted by Rondinelli and Vastag, (2000) and Lopez-Fernandez and Serrano-Bedia, (2007) is the cost involved for installation, thus, resulting in disinterest from small-and medium-sized companies. Another limitation of an EMS, as discovered by Psomas et al., (2011) is the need for intensive documentation and paperwork. Finally, Walker et al., (2007) note that the transition from installation to accomplishment of the environmental objectives tends to be lengthy.

2.8.3. Environmental Sustainability Accreditations (ESA)

Environmental sustainability accreditations are third party audits conducted by organizations, such as Green Globe 21 or EarthCheck whose aim is to verify, standardize and certify any hospitality and tourism business's efforts towards environmental sustainability (Sloan et al., 2009). These accreditations are a collection of principles raised by the Brundtland Report, Agenda 21 and the Rio Earth Summit of 1992. Moreover, as mentioned earlier, these accreditations are only presented to those companies which have already integrated an ESS and an EMS (Weaver, 2006). This literature review looks into three of the most recognized ESA's i.e. LEED, EarthCheck and Green Globe 21.

2.8.3.1. Leadership in Energy and Environmental Design (LEED)

In 1993, the United States Green Building Council (USGBC) came into existence through the collaborated efforts of Rick Fedrizzi, Mike Italiano and David Gottfried (USGBC, 2013a). The aim of this organization was to provide accreditations and recognition to American construction firms and buildings which not only had been structured to be energy saving, but, also cost-efficient. However, in 2000, the company launched their Leadership in Energy and Environmental Design (LEED) accreditation for environmentally sustainable buildings whose reach would not be geographically restricted to the USA (USGBC, 2013a). Current figures suggest, the LEED accreditation is one of the most highly recognized and well-known green or environmentally sustainable building accolade in more than 130 countries around the world (USGBC, 2013b).

Until now, LEED accreditation has been identified as a green building programmes and the focus will now shift towards understanding this accreditation in detail. LEED is a third party-approved accreditation provided for different sorts of buildings that are voluntary, market – driven and consensus-based (USGBC, 2013c). LEED can be customized to suit any industry and their premises, hence, making the credential versatile. LEED also enables the building owners to accomplish their premises bottom line as well as, providing adequate space for its users (Sloan et al., 2009).

In order to attain this accreditation, buildings have to meet certain criteria, which will be discussed in the next paragraph.

The LEED committee has underlined certain criteria that buildings should meet, suggesting that the initiatives employed to become environmentally sustainable be translated into points. The total of these points would determine the rating for the premises which can be platinum, gold or silver. The criterion for buildings varies on the basis of their usage, for instance; the criteria for schools or hotels would differ in terms of energy usage (USGBC, 2013c). There are several prerequisites, however, that all applicant premises must fulfill irrespective of their building type or usage for instance; water efficiency, indoor environment quality, materials used for construction, energy conservation techniques and several others. Moving forward, the focus of the following section now shifts towards LEED in the hotel industry.

In a hospitality update by USGBC, (2012) presently, 141 hotels have been certified by the LEED committee as environmentally sustainable sites. The justification for such a low number of accreditations has been provided by USGBC, (2012) suggesting that the misconception comes from hotel owners and managers regarding the cost involved in setting up hotels which are environmentally sustainable. Wellman, (2012) emphasizes that hotels have a great opportunity and responsibility to control their environmental impact, for the reason that hotel rooms and their negative impacts on the environment are one of the biggest contributors.

In the case of a hotel that aims to reduce its impact on the environment, significant investment is required to ensure that resources such as energy or raw materials are optimally utilized. Wellman, (2012) notes as an example of this a gold-certified LEED property in Santa Monica, USA which installed a device in each of their rooms to switch off the lighting and reduce the heating ventilation and air conditioning (HVAC) unit of the rooms when unoccupied, all in the pursuit of reducing energy consumption. The construction of the hotel is such that, while providing scenic views to its customers' the sunlight illuminates the guest areas and rooms hence, reducing electricity consumption of the hotel (Wellman, 2012).

To conclude, this is just one example of the hotel industry taking a step towards becoming environmentally sustainable and the presence of accreditations such as LEED

acknowledging and recognizing these efforts encourages further development and progress.

2.8.3.2. EarthCheck

The accreditation 'EarthCheck' was an effort made by the Australian government in 1997, to focus on the sustainability of the hospitality and tourism industry (EarthCheck, 2011a). EarthCheck is the commercial division of the Sustainable Tourism Cooperative Research Centre (STCRC) which incorporates a science-based approach to establishing initiatives, leading to a sustainable triple bottom line for communities, governments and businesses around the globe (EarthCheck, 2011a).

At present, EarthCheck is under the ownership and management of EC3 Global, a global environmental management firm and an advisory group which helps companies to successfully operate, establish marketing goals and set and accomplish sustainability objectives (EC3 Global, 2011). Nonetheless, the main purpose of EarthCheck is to benchmark and accredit organizations or properties for the efforts made towards reduction of negative environmental impacts. The foundations of this accreditation are the principles that were laid down in Agenda 21 at the Rio Earth Summit in 1992 (EarthCheck, 2010). Over the years, EarthCheck has become one of the most prestigious environmental sustainability focused accreditations in the hospitality and tourism industry (EarthCheck, 2010 and EarthCheck, 2011a).

Currently, the services of EarthCheck are spread in more than 70 countries, helping more than 1300 customers to accomplish their environmental sustainability objectives (EarthCheck, 2011a). Over the years, EarthCheck-accredited companies and properties have benefited in number of ways, for instance; the Taj Residency, in Bangalore, India, through its commitment towards attaining this accreditation was able to increase its dependency on renewable sources for energy from 7 per cent to 30.4 per cent. Further, the business was also able to recycle 98 per cent of its solid waste, avoiding any further environmental degradation (EarthCheck, 2011).

Moreover, EarthCheck's importance has also moved to other sectors, such as airports, local councils, laundry firms, golf courses, spas, cruises and many more. Additionally,

EarthCheck accreditation has been further categorized to suit individual initiatives and companies, for example; EarthCheck schools. This programme enables children and teachers to understand the concept of environmental sustainability and educates them about practices through which their household's carbon footprints can be reduced (EarthCheck, 2011b). Another example is the EarthCheck sustainable design. Here the certified entity is awarded on the basis of present and future environmental considerations of the building, materials used for the construction, methods employed during construction, ecological preservation programmes placed and the overall environmental sustainability initiatives of the building (EarthCheck, 2011b).

In relation to EarthCheck accreditation, for this research the category of EarthCheck 'certified company' is the main focus. This category is the one most acknowledged by hospitality and tourism operators. EarthCheck-certified company accreditation is awarded to companies on the basis of their commitment towards environmental sustainability with bronze, silver, gold or platinum grades (EarthCheck, 2011b). To acquire this accreditation EarthCheck commences an audit of the company as EarthCheck believes that any sustainability initiatives should be assessed by a third party to validate the outcome (EarthCheck, 2011b).

In summary, the EarthCheck accreditation was formed as an incentive for the hospitality and tourism operators by the Australian government to help businesses, councils and communities understand the negative impact on the environment through their operations and to ensure sustainability of a firm's triple bottom line. As highlighted in this section, EarthCheck accreditation is highly recognized and sought-after in the hospitality and tourism industry. Additionally, the penetration of this accreditation into other sectors such as building, design and schools has also been pointed out. Lastly, EarthCheck accreditation is a means through which companies can verify that the ESP's employed are having a positive impact on their triple bottom line, particularly as EarthCheck has now gone global and beyond hospitality and tourism industry (EarthCheck, 2011a).

2.8.3.3. Green Globe 21

Green Globe 21 is an organization which provides environmental sustainability accreditation along with marketing services, education and training to the hospitality and tourism industry and related supply chain firms (Sloan et al., 2009). The foundation of the this organization was laid by the efforts of the World Tourism and Travel Council (WTTC) and the International Hotel and Restaurant Association (IH&RA) in 1994 after the United Nations Earth Summit of 1992 took place in Rio de Janeiro, Brazil (Conner, 1995 & Sloan et al., 2009). During this summit, dignitaries from around 182 countries gathered to discuss the negative impacts on the environment through the excessive use of non-renewable resources (Hyde and Law, 2005 and Green Globe, 2012). At present, Green Globe 21 provides its expertise and accreditations for commitment towards environmental sustainability in 83 countries around the world with their headquarters situated in Los Angeles, USA (Green Globe, 2012).

The main purpose of Green Globe 21 is to globally benchmark and provide accreditation to tourism and hospitality businesses and their suppliers which have invested on ensuring their operations are environmentally sustainable (Green Globe, 2012). For example; FN – Hotelaria is a Portuguese kitchen equipment supplier that has been certified by Green Globe 21 for their efforts in ensuring ES of their operations (Green Globe 2012a). Another example is the Amadeus fleet of river cruisers which has been certified by Green Globe 21 for ensuring minimal harm to the environment during their voyages (Green Globe 2012a). Moreover, Green Globe 21 also underlines the best practices which would enable an organization to accomplish its environmental objectives (Conner, 1995).

Green Globe 21 accreditation is presented to a company after a thorough inspection of the premises has been undertaken where 337 compliance pointers placed under four standard criteria's have been verified. Furthermore, twice a year these standards are reviewed and updated by Green Globe 21 auditors (Green Globe, 2012). However, the aforementioned inspection pointers are simply a collection of principles and standards from environmentally centered institutions and conferences such as the Agenda 21, ISO – 9001/ 14001, global tourism criteria and a few others (Green Globe, 2012b).

The benefits of such accreditation are abundant, however; certain advantages are worth noting such as how the accredited company is able to reduce its operational costs (Green Globe, 2012a), and improve the image of the business because of the popularity of the accreditation among customers (Hyde & Law, 2005). Green Globe 21 also offers training and education not just to the employees, but, also to the stakeholders of the company (Hyde and Law, 2005 & Green Globe, 2012a), and lastly, due to its nature of continuous improvement allows businesses to maintain their triple bottom line (Green Globe, 2012a).

To summarize, Green Globe 21 has been tailored specifically for the hospitality and tourism industry and also other intermediaries such as suppliers, airports etc. (Hyde and Law, 2005). This section initially talks about the initiation of certification by the WTTC and IH&RA in 1994 (Sloan et al., 2009). The focus then shifts towards the objectives of this accreditation which according to Green Globe, (2012) is as a global benchmarking and accreditation provider to the tourism industry, providing marketing services for the accredited companies and education and training to employees and stakeholders. Finally, major benefits have also been highlighted which are acquired through an on-site inspection of the premise by an auditor (Green Globe, 2012a).

2.9. Conclusion

In conclusion, the literature review has highlighted different notions about sustainability. Sustainability is viewed as an obligation (Solow, 1992) or as a practice (Filho, 2000). As the main theme of this research revolves around environmental sustainability (ES), which, as stated by Goodland, (1995) and Costanza and Patten, (1995) is about ensuring that the needs for living a convenient human life are met without causing any adverse impacts on the environment and ensuring that the same can be accomplished by future generations. The literature review also discusses ES in businesses which has been fuelled from stimulus by customers (Manaktola & Jauhari, 2007), financial benefits (Penny, 2007) and an improved image of the firm (Bohdanowicz, 2005). Certain criticisms have also been identified, such as alterations in the organizations structure and operations (Rondinelli & Vastag, 2000).

Further criticisms have been directed towards ES in the hospitality and tourism industry; the literature indicates the need for high investment (Mensah, 2007) and the problem of

ES being regarded as impractical and dysfunctional (Hobson & Essex, 2001). However, the hospitality and tourism industry dependence on the local community's resources imposes an obligation to integrate ES (Richard and Hall, 2000 and Gossling and Hall, 2006). Similarly, the hotel industry ought to employ environmentally sustainable practices, as stressed by Brown, (1996), Bader, (2005) and Goldstein and Primlani, (2012) as a result of the sector's dependency on the local resources. With the help of the example of the Orchid Hotel in Mumbai, India, the applicability of the theory has been established.

As environmentally sustainable practices lead to ES in a hotel, Sigala (2008) states that ensuring the supply chain of a hotel is environmentally sustainable is essential, seen with the help of a flow chart adopted by Kothari et al., (2005). This section also listed some environmentally sustainable supply chain practices however, the 'green multiplier' is viewed as the most appropriate of all for the hotel industry (Preuss, 2005).

Environmental sustainability standards (ESS), systems (EMS) and accreditations (ESA), along with their hierarchy, have been mentioned. The hierarchy suggests that environmental sustainability standards (ESS) should be established and adhered to first, which lays foundations for an environmental management system (EMS). Once a hotel has established an environmentally sustainable standard and a system, the business can attain accreditations, which act as a third party audit to confirm a hotel's commitment towards environmental sustainability. However, ISO – 14001 has been identified as environmental sustainability standard (Lopez-Fernandez & Serrano-Bedia, 2007 & Chan, 2009) and an accreditation (Holt, 1998 & Chan, 2009) simultaneously.

3. Chapter – Methodology

3.1. Introduction

The literature review chapter detailed the theories and terminologies relating to environmental sustainability, supply chain and eco-labels. This chapter will elaborate on the research methodologies adopted. The objective of this research is to identify whether there has been any change in expectation of business travelers towards environmental sustainability (ES) in Delhi's premium hotels (4 and 5 star). This chapter starts by outlining the research aims, followed by establishing and introducing the paradigm of this research, that is, a post-positivist approach. The chapter moves onto providing justifications for the chosen sample, i.e. the business travelers, and outlining the data collection techniques chosen for this study. The final section of the chapter will discuss the data analysis technique employed.

3.2. Research Aims

- To ascertain whether has been any change in the attitude of business travelers towards environmental sustainability since 2007 in Delhi premium hotels.
- To investigate the influence of environmentally sustainable practices integrated by hotels on business travelers' selection of premium hotels, and explore the willingness of the customers to pay extra for environmentally sustainable initiatives.
- To identify the current environmentally sustainable practices integrated by premium hotels in Delhi.

3.3. Research Paradigm

A post-positivist research paradigm has been adopted for this research. As defined by Ponterotto, (2005), paradigms are a collection of assumptions on specific themes which are interrelated and provide a conceptual and philosophical framework for a study. Mackenzie and Knipe (2006) and Bryman and Bell (2011), have identified paradigms as theoretical frameworks of a discipline that affect the manner in which the gathered knowledge is analyzed and interpreted.

3.3.1. Post-positivist

The post-positivist research paradigm, as stated by Gale and Botterill (2005) and Henderson (2011), suggests that understanding of any existent or non-existent theory will vary from individual to individual. For instance, the definition of sustainability, as outlined by Porritt (2005), states that preservation of resources can used by not only the present but the future generations as well. On the other hand Solow (1992), states that sustainability is an obligation to maintain economic, environmental and social capitals.

The nature of this research paradigm has been outlined by Mackenzie and Snipe (2006), Bryman and Bell (2011), and Veal (2011), enabling the researcher to acknowledge that every individual connected with the research can be influenced by idiosyncrasies and biases. Thus, Cooper, (1997) and Veal (2011) assert that, due to the paradigm's nature, research methodologies may differ among studies employing a post-positivist paradigm. This research is based on the study conducted by Manaktola and Jauhari (2007) and, therefore, to ensure consistency for more accurate findings, a post-positivist paradigm is chosen.

3.3.2. Quantitative Research

Quantitative research is adopted for this research which focuses on understanding the change in expectations of the customers towards environmentally sustainable practices employed by Delhi hotels since 2007, and the willingness to pay extra for such practices. Quantitative research uses statistical data to ascertain relationships between different variables (Altinay & Paraskevas, 2008). However, the results from this method may impact on the relation between the research and reality (Bryman & Bell, 2011). To clarify, the data collection for this research is through a self-completion online questionnaire that inquires about the participants' understanding of environmental sustainability in Delhi hotels. Hence, the participants; notion on the subject could be biased or erroneous.

3.3.3. Deductive Reasoning

This research's chosen research paradigm, post- positivism has been teamed with deductive reasoning. The concept of deductive reasoning as explained by Guba and Lincoln, (1994) and Bryman and Bell (2011), suggests that this reasoning concentrates on a particular theory and further narrows it down, that is then tested and concluded. This research is testing the theory developed by Manaktola and Jauhari in 2007 concerning the perception of hotel customer's towards ESP undertaken by Delhi's premium hotels. Their conclusion suggests that some customers' were willing to pay extra for a hotel's ESP and that there was also an increasing level of awareness amongst the hotel customers. Furthermore, the conclusion also highlights that there was a positive inclination by hotel customers towards properties with active ESPs (Manaktola & Jauhari, 2007).

3.3.4. Ontology

The research paradigm adopted for this research is post- positivist and it is further explained by Guba and Lincoln (1994), and Veal (2011), that ontological basis suggests that a reality or theory is assumed to exist; however, reality can be interpreted inaccurately or differently by individuals. Therefore, environmental sustainability as a concept can be assumed to exist within the hotel industry, justified by the literature present on the subject as reflected in the above literature review, however, to certain hotel operators and customers this concept cannot be accurately comprehended.

3.3.5. Epistemology

The post- positivist epistemological basis would suggest modified objectivism/dualism, which states, that the researcher can influence the researched subject; however, researcher-subject autonomy and objectivity are regarded as strict guidelines during the research process (Guba and Lincoln, 1994 & Ponterotto, 2005). In case of this research, the online questionnaire is the chosen data collection technique. The researcher has questioned the participants (business travelers) about their attitudes and expectations towards environmental sustainability in Delhi hotels, also, asking about the participants' willingness to pay extra for such practices.

Furthermore, the questionnaire also asked the participants' about the change in their perspective towards environmental sustainability since 2007, although the participants have been restricted to individuals from the USA, UK and the rest of India.

3.4. Participation Selection

The population for this research is business travelers who stay in Delhi's premium hotels during their business trips to the city. This research is contributing to the research conducted by Manaktola and Jauhari in 2007 where 66 participants (general hotel customers) were approached to make up the sample size. For the purpose of this research it was expected to obtain 30 valid responses from participants, however 38 valid responses were collected which Veal (2001) considers an adequate sample size. This research will also be geographically limited to Delhi rather than the entire NCR, which includes Delhi, Gurgaon, and Noida, as covered by Manaktola and Jauhari (2007). Finally, this research focuses on business travelers coming from the three regions namely the USA, the UK and the rest of India, identified by the Ministry of Tourism, India (2012) as key business travelers to Delhi. The participants were initially selected by using key informants through the researcher's contacts. This then was followed by a snowball sampling method to obtain more participants for this research.

3.5. Snowball Sampling

The data was collected through a technique known as snowball sampling where the researcher's contacts were approached, and then they in turn circulated the invitation to further prospective participants (Bryman & Bell, 2011). The snowball sampling involved sending invitations, along with the consent forms and link to the online survey, to the contacts of the researcher in India, who in turn passed on the same to potential participants from the USA, the UK and the rest of India. The limitation of this sampling technique is pointed out by Altinay and Paraskevas (2008), is the biased outcomes due to limited access to the population.

3.6. Ethical Considerations

The chosen data collection technique for this research was online questionnaires that were sent to participants via email, resulting in a very low participant researcher interaction, hence low risk. There was no possibility of the participants experiencing any discomfort as the survey uses self-completion questionnaires. The participants were also assured of anonymity as they were given a number or pseudonym in case of any representation during the data analysis. The questionnaires constructed for this study were approved by AUT's Ethic Committee (AUTEC) dated 30th January, 2013. Along with the questionnaires, the participants were also sent an information sheet covering the research objectives and inviting any questions or queries regarding the research or the survey.

3.7. Questionnaire Design

The survey designed for this research had twelve questions, requiring anything between 10 to 15 minutes of the participants' time thus, making the survey time, and thus, making the survey time efficient (Bryman & Bell, 2011). Also, the questions for the survey were approved by AUT's Ethics Committee (AUTEC). The questionnaire was designed by modifying the questions asked by Manaktola and Jauhari (2007), because access to their questionnaires was not possible. The self-completion questionnaire enquired as to the expectations of the customers towards environmental sustainability of hotels in general, and in Delhi, the influence of ESPs on the participants' hotel selection, and any change in their personal or their company's outlook on environmental sustainability and demographics. The online questionnaires presented the participants with multiple-choice questions, Likert scales and descriptive questions.

3.8. Data Collection

The participants were requested to complete an online survey, the link to which was sent along with the invitation email. The snowball sampling method was used, also known as chain is sampling, as elaborated by Bryman and Bell (2011), who state that the researcher approaches their contacts to invite participants who match up to the population description of the research.

The online survey tool chosen for this research was Qualtrics; a system supported by the New Zealand Tourism Research Institute (NZTRI) at AUT. Qualtrics can collect the data, analyze the data and administer the survey simultaneously. The reason for choosing surveys as a data collection technique is that this method allows the researcher to design questions that are subject-focused, plus this method also provides choices to the participants, resulting in direct and simplified answers. Another reason for choosing this method was that the proposed participants of the research are business travelers and therefore access to a computer with an internet connection is possible and, with the survey being online the process of completing the survey becomes hassle-free.

There were a number of obstacles the researcher came across during the data collection process. One of the obstacles was due to the geographic boundaries and differences and the time between the researcher and the participants (business travelers from the USA, the UK and India) which led to a communication lag.

Another obstacle was the various rates at which the survey was completed. During the data collection process the rate of completed surveys delayed the data analysis stage. Initially, the researcher's father was approached to invite appropriate participants to take part in the survey, however the responses received were insufficient in number. The researcher then approached friends and acquaintances to invite their contacts to be a part of this research as well. Alternative efforts for gaining access to participants were made; the researcher's parents were requested to approach relatives and other family members who were willing to help source participants for the study. Resulting from this a family member provided access to a numbr of participants who meet the required critera for participant selection. While access to participants was obtained through personal contacts, the impact on the responses should be minimal as the approached parties were advised not to complete the survey themselves but rather to invite their contacts who meet the participant selection criteria.

Thus far the data collection process provided explanations for and limitations of the initial two aims of the research. The final research objective looks into the environmentally sustainable practices Delhi's premium hotels have integrated, suggesting the supply aspect.

The data collection process for this aim was to access the web pages of individual hotels and to collect information concerning their ESPs. Each of the practices undertaken by these hotels would be coded similarly to those used in the online questionnaires.

Three additional variables to Manaktola and Jauhari's research were added:

- A statement regarding environmental sustainability where no initiatives are listed. This is where a hotels webpage mentions their commitment towards environmental sustainability, however, does not list any practices.
- Corporate social responsibility. This suggests that the hotel invests in providing aid to the local community by providing education, medical aid and other societal benefits.
- No initiatives undertaken. This means that the hotel's web page does not mention any environmentally sustainable programmes or initiative. This suggests that either the hotel operator does not consider environmental sustainability to be a major concern, or that the hotel has some environmental sustainability practices, but, they are not communicated.

3.9. Data Analysis

Data analysis for this research was completed using SPSS (Statistical Package for the Social Sciences), a computer-based statistical analysis programmes (Bryman and Bell, 2011 & Veal, 2011). Once the data was collected through Qualtrics, it was coded into SPSS to enable the provision of cross tabulations, frequencies, medians and pie charts in order to compute the results and accomplish this research's objectives. The final number of completed questionnaires received was 38, eight more than the proposed 30 responses.

3.10. Limitations of the Research

This research is limited by the lack of diversity of the participants in that only corporate customers have been taken into consideration. The small sample size of just 38 responses along with the selection of participants from only three generating markets including the US, the UK and India and the potential subjectivity of the responses received is a further limitation for this study.

4. Chapter – Findings

This research presents three research aims. This chapter will report on the first two aims and the final aim will be reported on in Chapter Five. The aims of this research are as follows:

- To ascertain whether there has been any change in the attitude of business travelers towards environmental sustainability in Delhi premium hotels since 2007 (Section 4.2)
- To investigate the influence of environmentally sustainable practices on the business travelers' selection of premium hotels (Section 4.3), and to explore the willingness of customers to pay extra for environmentally sustainable initiatives. (Section 4.5)
- To identify the environmentally sustainable practices that premium hotels in Delhi are undertaking. (Chapter Five)

This chapter presents the findings that relate to the initial two research aims. The findings related to the third research aim in chapter 5. The research findings are set out as follows

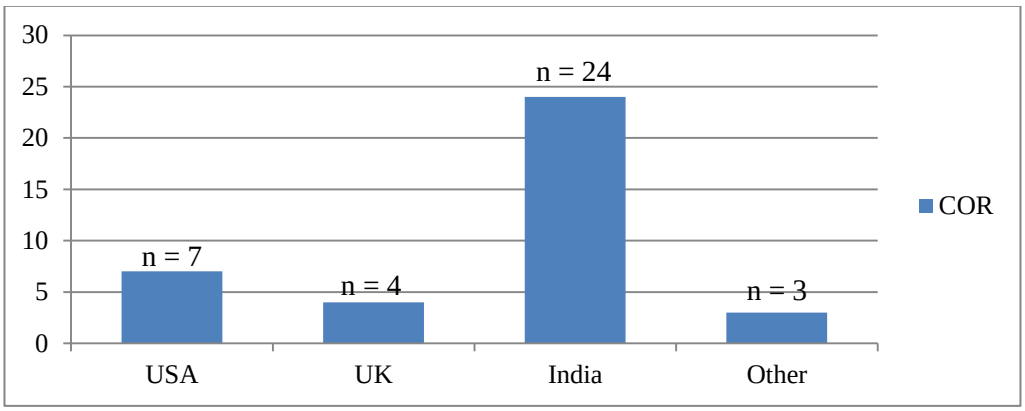
- Presenting the changing attitudes of business travelers visiting Delhi.
- Analyzing the influence of ESPs on business travelers' hotel selection.
- Understanding the willingness of the customers to pay extra for ESPs as a percentage of the premium they are willing to pay.
- Providing an insight into the demographics of the participants.

4.1. Demographics

In this research the focus is on business travelers visiting Delhi hotels who are from the US, the UK and the rest of India. The questionnaire also inquires as to the participants' age, number of trips to Delhi per year and the purpose of their visit.

4.1.1. Country of Residence

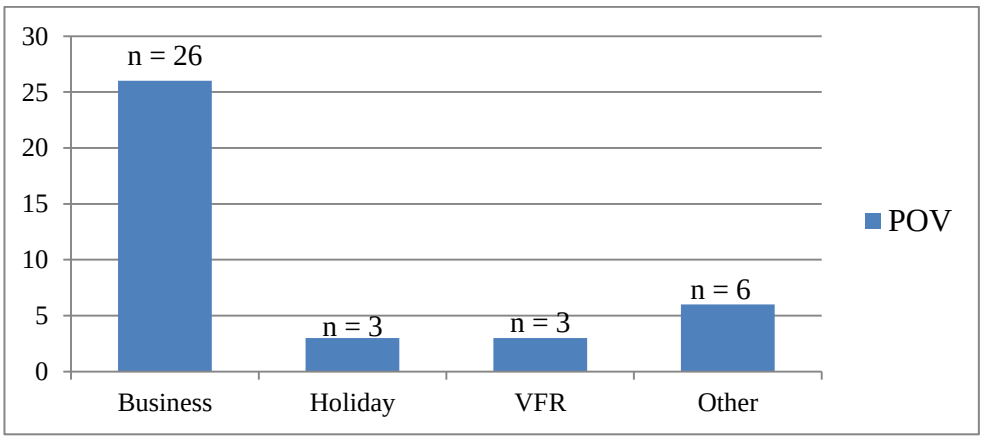
Figure 3: Participant's country of residence



The above bar graph highlights the nationalities of the 38 participants by asking 'What is your country of residence?' As can be observed, most participants are business travelers from India (n = 24), followed by participants from the US (n = 7) and the UK (n = 4). Finally, there were some participants whose country of residence was categorized as 'Other' (n = 3).

4.1.2. Usual Purpose of Visit to Delhi

Figure 4: Purpose of visit



The above bar graph indicates the 'usual purpose of visit to Delhi'. There are four variables of which the first is 'Business' (n = 26), selected by most participants as the major purpose for visiting Delhi. The second most common purpose of visit is 'Other' (n = 6), which could include visiting Delhi for training, education or medical purposes. The final two variables are 'Holiday' (n = 3) and 'Visiting friends and relatives' (n = 3) and are the least common reasons for visit.

4.1.3. Number of Trips and Age

The participants were also asked about the 'number of trips to Delhi in the last 12 months'. The number of trips to Delhi ranged from anything from one trip in a year to 20 trips in a year. However, the computed median of the number of trips to Delhi was 3 trips a year. In addition, the participants were asked to specify their age; the resulting median age of all participants was established as 34 years old.

Table 1: Number of trips and age

	UK	USA	India	Other
Number of trips to Delhi in the last 12 months	2	2	5	3
Median age of the participants	46	49	31	45

4.2. Change in the Attitude of Business Travelers

The first research aim was to identify if there had been a change in attitude of either a company's expectations or the business travelers' expectations towards environmentally sustainable practices (ESP) employed by hotels. Participants were asked if their individual expectations and their perceptions of the company's expectations toward environmental sustainability (ES) had changed since 2007. The following measures were used to indicate the participants' level of expectations: Extreme, Moderate, Slightly, No change or No opinion..

Table 2 presents the findings on the level of change in a company's outlook and the relationship between this and the participants' individual perspectives towards environmental sustainability (ES).

Table 2: Relationship between the changes in company's outlook with change in personal outlook towards environmental sustainability in hotels

	Change in company's outlook since 2007				
Change in personal outlook since 2007		Extremely	Moderately	Slightly	Total
	Extremely	**20** (87%)	**7** (50%)	**0** (0%)	**27** (71.1%)
	Moderately	**3** (13%)	**7** (50%)	**1** (100%)	**11** (28.9%)
	Total	**23** (100%)	**14** (100%)	**1** (100%)	**38** (100%)

Through the online questionnaires, the 38 participants suggest an extreme (27.1%), a moderate (28.9%) and a slight (100%) positive change in both the company's and the business travelers' outlook. Of the 38 participants, 23 (61%) responded that their company had had an extreme positive change in their outlook since 2007. The individual business travelers noted a 71.1 per cent extreme positive change in their outlooks, which is higher than for the companies. The combination of the companies and individuals' outlook suggested extreme positive change (87%).

Table 2 also indicates that there has been an extreme positive change (87%) to a moderate change (50%) in both the personal outlook of the business travelers and their company's outlook towards the ESP undertaken by hotels. This also indicates that personal and company outlooks are closely related.

Note that no participant selected the option of 'No change'; there was a positive change in the outlook for all the participants. Moreover, the results from the above table can be considered as highly significant as shown in Table 3.

Table 3: Chi-square relationship

	Value	**df**	**Approx. Sig. (2 – sided)**
Pearson Chi-square	8.300	2	.016
Likelihood Ratio	8.508	2	.014
Linear-by-Linear Association	8.021	1	.005
N of Valid Cases	38		

Table 4 displays the findings of participants in relation to the individual expectations of business travelers and their country of origin.

Table 4: Changes in personal outlook towards environmental sustainability in hotels compared with country of origin

	Country of Origin					
Change in personal outlook since 2007		UK	USA	India	Other	Total
	Extremely	**2** (50%)	**6** (85.7%)	**16** (66.7%)	**3** (100%)	**27** (71.1%)
	Moderately	**2** (50%)	**1** (14.3%)	**8** (33.3%)	**0** (0%)	**11** (28.9%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

A significant number of business travelers from the US (85.7%) indicated an extreme change in their personal outlook towards environmental sustainability in hotels. However, while all participants from the UK and India indicated an increase in change, when compared to the US there was an observed more moderate change in the outlook of business travelers (UK 50% and India 33.3%).

Table 5 shows the findings of participants in relation to their company's expectations of business travelers and their country of origin.

Table 5: Changes in company's outlook towards environmental sustainability in hotels compared with country of origin

	Country of Origin					
Change in company's outlook since 2007		UK	USA	India	Other	Total
	Extremely	**1** (25%)	**5** (71.4%)	**15** (62.5%)	**2** (66.7%)	**23** (60.5%)
	Moderately	**3** (75%)	**2** (28.6%)	**8** (33.3%)	**1** (33.3%)	**14** (36.8%)
	Slightly	**0** (0%)	**0** (0%)	**1** (4.2%)	**0** (0%)	**1** (2.6%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

Companies from the US have experienced more extreme (71.4%) change in their outlook towards environmentally sustainable hotels since 2007 compared to 75 per cent of participants from the UK, indicating a more moderate change to their company's outlook. Indian companies showed a slightly more extreme change (62.5%), although not as much as their US counterparts.

In conclusion, this section of the findings suggests a significant change since 2007 in both companies' and the business travelers' outlooks toward environmental sustainability in hotels. Further, business travelers from the US indicate an extremely positive change towards environmental sustainability in hotels; similar findings are also evident in the US companies' expectations.

4.3. Influence of Environmentally Sustainable Practice on Hotel Choice

Participants were asked to respond on what influence environmental sustainability practices (ESP) have on their choice of a hotel for accommodation during their visit to Delhi. The participants' levels of expectations were expressed as: Must have, Expect, Nice to have, Not looking for or Don't expect.

The participants were asked to identify who influences the purchasing decision for a hotel in Delhi during their visit. The participants were asked to indicate their level of influence, using the following measures: None at all (my company decides), some influence, totally my decision, stay at the same place because I like the hotel in general, or other. The following tables provide data on the relationship between each variable and the influence of hotel selection.

4.3.1. Internationally recognized environmental certifications with influence on hotel choice

Table 6: Environmental certifications' influence on hotel choice

		Influence on hotel choice in Delhi during visit			
		Company Decides	Totally My Decision	Other	Total
Internationally recognized environmental certifications	Must Have	**7** (33.3%)	**3** (18.8%)	**0** (0%)	**10** (26.3%)
	Expect	**5** (23.8%)	**4** (25%)	**0** (0%)	**9** (23.7%)
	Nice to have	**9** (42.9%)	**9** (56.2%)	**1** (100%)	**19** (50%)
	Total	**21** (100%)	**16** (100%)	**1** (100%)	**38** (100%)

Table 6 indicates that, generally, the company has more influence with a total of 21 out of 38 respondents, (55%) compared to that of the individual business Traveller (Totally my decision with a total of 16 of 38 respondents (42%). The majority of participants (50%) selected the response 'Nice to have' for an internationally recognized environmental certification, while only 26.3 per cent expected that it was a 'must have'. It can also be seen that when a company decides, there is a higher expectation (33.3%), compared to when an individual business Traveller (18.8%) decides. However, whether it is the company or the individual deciding, there was no response that indicated participants were

not looking for or did not expect any environmental certifications. Also, no participant responded with 'Not looking for' or 'Don't expect'.

4.3.2. Green supplier influence on hotel choice

Participants were asked to indicate their preference concerning if the practice of hotels obtaining raw materials and recreational services from suppliers who maintain ES standards was important.

Table 7: Green supplier influence on hotel choice

		Influence on choosing hotel in Delhi during visit			
		Company Decides	Totally My Decision	Other	Total
Opting for green supplier for raw materials and recreational services	Must Have	**4** (19%)	**3** (18.8%)	**0** (0%)	**7** (18.4%)
	Expect	**8** (38.1%)	**8** (50%)	**1** (100%)	**17** (44.7%)
	Nice to have	**9** (42.9%)	**5** (31.2%)	**0** (0%)	**14** (36.8%)
	Total	**21** (100%)	**16** (100%)	**1** (100%)	**38** (100%)

Table 7 indicates that when choosing a hotel in Delhi, participants expect (50%) hotels to have a green supply chain (8 out of 17). While the hotel selection is made by the company, this practice is ranked as a 'Nice to have' by participants (42.9%).

4.3.3. Communicating environmentally sustainable practices

Table 8: The influence of communicating environmental sustainability on hotel choice

		Influence on choosing hotel in Delhi during visit			
		Company Decides	Totally My Decision	Other	Total
Communicating the ESP's	Must Have	**4** (19%)	**3** (18.8%)	**0** (0%)	**7** (18.4%)
	Expect	**12** (57.1%)	**8** (50%)	**1** (100%)	**21** (55.3%)
	Nice to have	**5** (23.8%)	**5** (31.2%)	**0** (0%)	**10** (26.3%)
	Total	**21** (100%)	**16** (100%)	**1** (100%)	**38** (100%)

Table 8 indicates that when the participant's company decides (57.1%), the hotel's communication of ESPs is taken as suggesting a stronger influence when compared against the total responses (55.3%). When choosing a hotel independently, participants state this practice as (Nice to have' (31.2%).

4.3.4. Linen re-use with influence on choosing a hotel

Table 9: Influence of linen re-use and choosing a hotel in Delhi

		Influence on choosing hotel in Delhi during visit			
		Company Decides	Totally My Decision	Other	Total
Opting for linen re-use to reduce water wastage	Must Have	**11** (52.4%)	**5** (31.2%)	**0** (0%)	**16** (42.1%)
	Expect	**5** (23.8%)	**7** (43.8%)	**1** (100%)	**13** (34.2%)
	Nice to have	**5** (23.8%)	**4** (25%)	**0** (0%)	**9** (23.7%)
	Total	**21** (100%)	**16** (100%)	**1** (100%)	**38** (100%)

Table 9 shows that the service of linen re-use is a 'must have' for 42.1 per cent (16 out of 38) of the respondents. Linen re-use is a 'must have' (52.4%) when the company chooses the hotel for participants, although this practice is ranked as 'Expected' (43.8%) when the participants select the hotel themselves.

4.3.5. Environmentally friendly products with influence on choosing a hotel

Table 10: Environmentally friendly products and the influence on hotel choice

		Influence on choosing hotel in Delhi during visit			
		Company Decides	Totally My Decision	Other	Total
Environmentally friendly products	Must Have	**8** (38.1%)	**6** (37.5%)	**1** (100%)	**15** (39.5%)
	Expect	**9** (42.9%)	**6** (37.5%)	**0** (0%)	**15** (39.5%)
	Nice to have	**4** (19%)	**4** (25%)	**0** (0%)	**8** (21.1%)
	Total	**21** (100%)	**16** (100%)	**1** (100%)	**38** (100%)

The expectation for environmentally friendly products in hotel rooms has been ranked equally (39.5%) as a 'must have' and 'expect'. Table 10 suggests that in the case where hotel selection is made by the participant's firm, there is an expectation (42.9%) of environmentally friendly products in the hotel. Conversely, when a hotel is selected independently by the participant, the level of expectation for the same is a 'Nice to have' (25%).

4.3.6. Recycling programmes with influence on choosing a hotel

Table 11: Recycling programmes on hotel choice

		Influence on choosing hotel in Delhi during visit			
		Company Decides	Totally My Decision	Other	Total
Recycling programmes	Must Have	**11** (52.4%)	**8** (50%)	**1** (100%)	**20** (52.6%)
	Expect	**8** (38.1%)	**4** (25%)	**0** (0%)	**12** (31.6%)
	Nice to have	**2** (9.5%)	**4** (25%)	**0** (0%)	**6** (15.8%)
	Total	**21** (100%)	**16** (100%)	**1** (100%)	**38** (100%)

With regards to recycling programmes, 52.6 per cent of all respondents suggest they are a 'must have', which is more likely to be a company decision at 52.4 per cent when compared to an individual (50%). The next level of expectation at 31.8 per cent for all respondents records a higher percentage (38.1%) when it is the company which decides.

With regards to the six environmental practices measured, none of the participants indicated that any of the practices were not looked for or expected, whether it was the company booking the hotel or the individual employee. There was a general expectation that the hotel would be engaged in environmentally sustainable practices.

From the above results it can be observed that hotel selections made by companies expect to see recycling programmes, environmentally friendly products in the rooms, and a green supply chain. However, when the participants select the hotel independently, they rank most practices as 'Nice to have', but do expect hotels to have a green forward and backward supply chain, hence indicating that a green supply chain does not influence the hotel selection of the participants during their visit to Delhi. It was suggested by two participants that hotel selection can be influenced by the designation of the participant within their organization, and that the same luxury is not given to participants who are lower in the organizational hierarchy of a company.

4.4. Expectations of ESP compared with Country of Residence

Participants were asked to respond on the level of expectations for environmental sustainability practices (ESP) that could influence the business travelers' choice of a hotel during their visit to Delhi. The participants' levels of expectations were measured by asking if each of the six hotels' practices were: Must have, Expect, Nice to have, Not looking or Don't expect.

The other question was to determine the country of residence of each participant. Options presented to the participants were: the US, the UK, or India. The following tables present the relationship between the participants' country of residence with the influence of each of the six practices.

4.4.1. Internationally recognized environmental certifications with country of residence

Table 12: Country of residence in relation to importance of internationally recognized environmental certifications

		Country of Residence				
		UK	USA	India	Other	Total
Internationally recognized environmental certifications	Must Have	**0** (0%)	**2** (28.6%)	**8** (33.3%)	**0** (0%)	**10** (26.3%)
	Expect	**1** (25%)	**1** (14.3%)	**4** (16.7%)	**3** (100%)	**9** (23.7%)
	Nice to have	**3** (75%)	**4** (57.1%)	**12** (50%)	**0** (0%)	**19** (50%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

The levels of expectation for this practice as a 'must have' reached 26.3 per cent with the participants from India ranking this practice the highest (33.3%). The participants from both the US (57.1%) and the UK (75%) ranked these practices as 'nice to have' in Delhi's premium hotels.

4.4.2. Green supplier with country of residence

Table 13: Country of residence in relation to importance of green suppliers

		Country of Residence				
		UK	USA	India	Other	Total
Opting for green supplier for raw materials and recreational services	Must Have	**0** (0%)	**1** (14.3%)	**5** (20.8%)	**1** (33.3%)	**7** (18.4%)
	Expect	**1** (25%)	**3** (42.9%)	**11** (45.8%)	**2** (66.7%)	**17** (44.7%)
	Nice to have	**3** (75%)	**3** (42.9%)	**8** (33.3%)	**0** (0%)	**14** (36.8%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

The levels of expectation for this practice as a 'must have' (18.4%) indicates that for Indian participants (20.8%) it presented as a higher influence compared to their counterparts. Participants from the US (42.9%) and the UK (75%) ranked this practice as 'nice to have' in Delhi hotels.

4.4.3. Communicating ESP with country of residence

Table 14: Country of residence in relation to the importance of the communication of ESPs

		Country of Residence				
		UK	USA	India	Other	Total
Communicating the ESPs	Must Have	**0** (0%)	**0** (0%)	**7** (29.2%)	**0** (0%)	**7** (18.4%)
	Expect	**3** (75%)	**5** (71.5%)	**12** (50%)	**2** (66.7%)	**21** (55.3%)
	Nice to have	**1** (25%)	**2** (28.6%)	**5** (20.8%)	**2** (66.7%)	**10** (26.3%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

In the case of the communication of ESPs by a hotel, the response 'Expect' was ranked highly by the respondents (55.3%). The participants from India ranked this practice as a 'must have' (29.2%), while participants from the UK ranked this as 'expected' (75%). Participants from the US ranked this practice between an 'expected' (71.5%) action and 'nice to have' (28.6%).

4.4.4. Linen re-use with country of residence

Table 15: Country of residence in relation to the importance of an option for linen re-uses

		Country of Residence				
		UK	USA	India	Other	Total
Option for linen re-use to reduce water wastage	Must Have	**3** (75%)	**1** (14.3%)	**11** (45.8%)	**1** (33.3%)	**16** (42.1%)
	Expect	**1** (25%)	**4** (57.1%)	**7** (29.2%)	**1** (33.3%)	**13** (34.2%)
	Nice to have	**0** (0%)	**2** (28.6%)	**6** (25%)	**1** (33.3%)	**9** (23.7%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

The highest total is seen for 'must have' (42.1%), suggesting a high level of expectation for this practice. Linen re-use is ranked as a 'must have' by UK (75%) participants, while participants from the US ranked this between 'expected' (57.1%) and 'nice to have' (28.6%). With participants from India the preference for this practice was reflected as a 'must have' (45.8%).

4.4.5. Environmentally friendly products with country of residence

Table 16: Country of residence with environmentally friendly products

		Country of Residence				
		UK	USA	India	Other	Total
Environmentally friendly products	Must Have	**0** (0%)	**1** (14.3%)	**12** (50%)	**2** (66.7%)	**15** (39.5%)
	Expect	**2** (50%)	**4** (57.1%)	**8** (33.3%)	**1** (33.3%)	**15** (39.5%)
	Nice to have	**2** (50%)	**2** (28.6%)	**4** (16.7%)	**0** (0%)	**8** (21.1%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

There are high levels of expectation that hotels will use 'environmentally friendly products' (39.5% 'must have' and "expect" at 39.5%). Environmentally friendly products are indicated as a 'must have' (50%) by Indian participants. While, the participants from USA and UK have ranked this practice between expected (UK – 50% and USA - 57.1%) and a nice to have (USA – 28.6% and UK – 50%).

4.4.6. Recycling programmes with country of residence

Table 17: Country of residence on recycling programmes

		Country of Residence				
		UK	USA	India	Other	Total
Recycling programmes	Must Have	**1** (25%)	**3** (42.9%)	**14** (58.3%)	**2** (66.7%)	**20** (52.6%**)**
	Expect	**3** (75%)	**3** (42.9%)	**6** (25%)	**0** (0%)	**12** (31.6%)
	Nice to have	**0** (0%)	**1** (14.3%)	**4** (16.7%)	**1** (33.3%)	**6** (15.8%)
	Total	**4** (100%)	**7** (100%)	**24** (100%)	**3** (100%)	**38** (100%)

Recycling programmes is a practice that Indian participants rank as a 'must have' (58.3%) in Delhi hotels, on the other hand, participants from the USA (42.9%) and the UK (75%) rank this initiative as 'expected'.

The above tables sort data from responses to questions on participants' expectations of ESPs in Delhi hotels, broken down into groups of country of residence of the participants. Therefore, from the above tables, the following can be observed:

- Internationally recognized environmental certifications are more likely to be viewed as 'nice to have' (50%).
- The supply chain within Delhi hotels (A green supplier) is likely to be (44.7%) by companies and individual business travelers.
- Communicating the hotel's ESPs' is considered to be 'expected' (55.3%).
- Providing the option of linen re-use is more likely to be 'must have' (42.1%).
- Environmentally friendly products in the hotel rooms are likely to be either 'must have' or 'expected' (39.5%).
- Recycling programmes are a 'must have' (52.6%) for Delhi hotels.

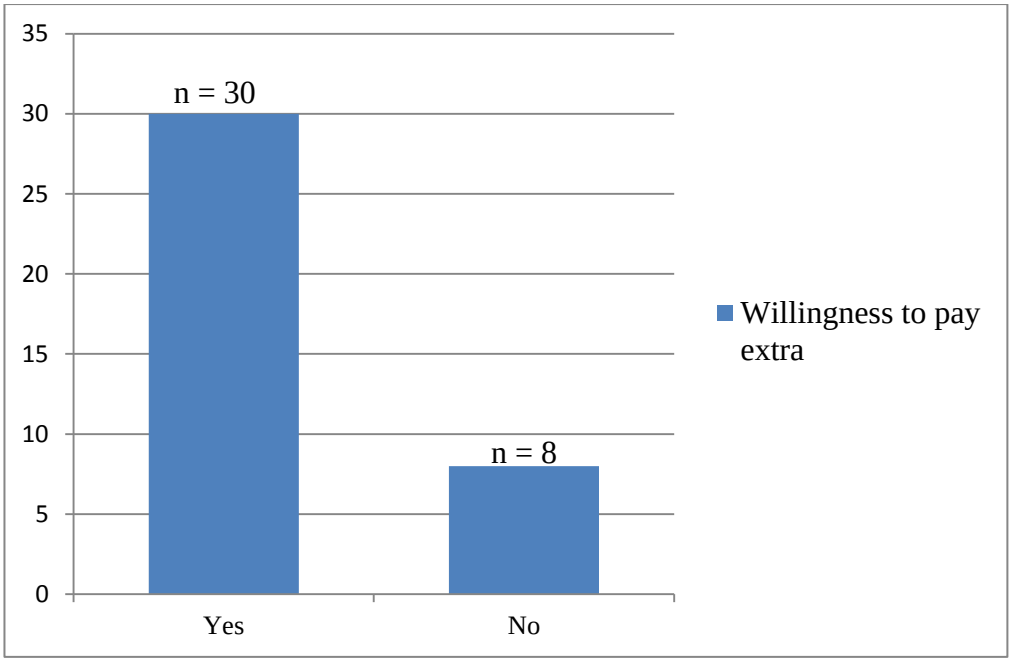
Additionally, participants from India generally ranked these practices higher in importance than participants from the USA and the UK. Note that all participants provided a positive response, meaning none of the responses were 'Don't expect' or 'Not looking for'.

4.4.7. Willingness to Pay Extra

Participants were asked whether they were willing to pay extra for accommodation at a hotel that has environmentally sustainable practices (ESP), and, if so, how much extra. Figure 3 indicates customers' (individual business travelers' and companies) willingness to pay for hotel accommodation with ESPs.

4.4.8. Willingness to pay extra

Figure 5: Number of business travelers willing to pay extra

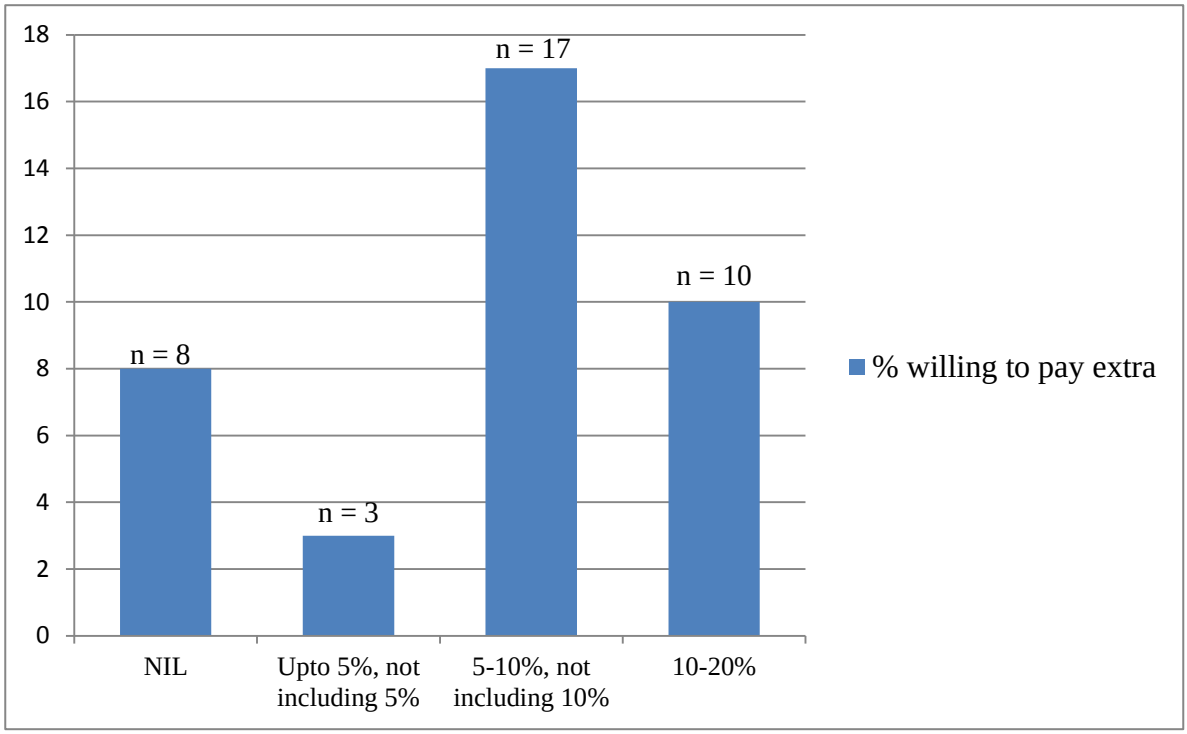


Of the total 38 responses received, 79 per cent of the business travelers and their companies (n = 30) indicated they were willing to pay extra for the ESP's being employed by Delhi hotels, while, 21 per cent were unwilling to pay extra (n = 8).

Participants were also asked 'how much more as a percentage they (the individual and/or company) would be willing to pay for a hotel with ESPs (see Figure 6).

4.4.9. Percentage willing to pay extra

Figure 6: Additional amount customers are willing to pay extra as a percentage



The above chart highlights four variables representing the extra percentage the business practices integrated into Delhi's premium hotels. The first variable 'Nil' (n = 8) represents those business travelers who are unwilling to pay extra for ESPs which is consistent with the previous chart.

Of the 38 participants, a significant number of business travelers are willing to pay extra (45% stated between 5 and 10% and 26% stated between 10 and 20%) for hotels with ESP's adopted. However, there are a number of participants (8%) who indicate that there should be no extra charge or who are willing to pay only a small amount less than five per cent, for ESP's.

5. Chapter – Hotels/Hotel Chains Environmentally Sustainable Practices

This presents the data to meet the following research aim:

- To identify the current environmentally sustainable practices that premium hotels in Delhi are undertaking.

A web based investigation was undertaken to identify Delhi's premium hotels, their ES initiatives and range eco-labels awarded. There are 35 premium hotels in Delhi of which 27 properties are listed by the Ministry of Tourism, India, (2012). The data for each property has been collected by accessing the websites of the individual hotels and locating information on the property's ESPs.

This chapter displays three tables: the first table highlights the domestically owned premium hotel and hotel chains. Similarly, the second table presents similar variables, but, for international hotels and chains. The third table presents the cumulative analysis of the two previous tables.

A key has been created to allow better understanding of the practices undertaken by the hotels in table 18 and 19. This key has been created by pointing out the most accepted practices mentioned in the research of Manaktola and Jauhari (2007), alongwith, three additional variables ,'statement present regarding environmental sustainability, no initiatives mentioned' and 'corporate social responsibility'.

Environmentally Sustainable Practices	Code
Internationally recognized environmental sustainability certifications (ESS, EMS, and ESA).	1
Opting for green suppliers for raw materials.	2
Communicating the environmentally sustainable practices.	3
Opting for linen re-use to reduce water wastage.	4
Environmentally friendly practices.	5
Recycling Programmes.	6
Statement present regarding environmental sustainability, no initiatives listed	7
Corporate Social Responsibility (CSR)	8

Table 18: Delhi's domestic premium hotels

Name/ Variables	Total Number of Rooms	Number of Sites in Delhi	Environmental Sustainable Practices	ESS/ EMS/ ESA (Note: refer to Figure 2 as per the hierarchy)
DOMESTIC HOTELS and HOTEL CHAINS				
Taj Hotel Resorts and Palaces	784	3	1,2,3,4,5,6 and 8	ESS/ EMS/ ESA
Sarovar Hotels and Resorts	221	4	7	Not Mentioned
The Uppal	48	1	1,2,3,4,5 and 6	ESS/ EMS/ ESA
ITC Hotels Limited	1051	3	1,2,3,4,5,6 and 8	ESS/ EMS/ ESA
The Claridges Hotels and Resorts	140	1	4,5 and 6	Not Mentioned
The Leela Palace Hotels and Resorts	260	1	2,3,4,5 and 6	Not Mentioned
Oberoi Hotels and Resorts	283	1	No initiatives undertaken	Not Mentioned
The Park Hotel	220	1	No initiatives undertaken	Not Mentioned
The Imperial Hotel	235	1	3,4,5 and 6	Not Mentioned
The Hans Hotel	77	1	No initiatives undertaken	Not Mentioned
Hotel Diplomat	25	1	No initiatives undertaken	Not Mentioned
Hotel Vikram	68	1	No initiatives undertaken	Not Mentioned
Aman Resorts	68	1	No initiatives undertaken	Not Mentioned
Total	3480	20		

Table 19: Delhi's international premium hotels

Name/ Variables	Total Number of Rooms	Number of Sites in Delhi	Environmental Sustainable Practices	ESS/ EMS/ ESA (Note: refer to Figure 2 as per the hierarchy)
INTERNATIONAL HOTELS and HOTEL CHAINS				
Hyatt Regency	507	1	2,3,4,5,6 and 8	Not Mentioned
Crowne Plaza	401	3	1,2,3,4,5 and 6	ESS/ EMS/ ESA
Kempinski Hotels	480	1	4,5,6 and 8	Not Mentioned
Hilton Hotels and Resorts	990	5	1,2,3,4,5,6 and 8	ESS/ EMS/ ESA
Shangri – La Hotels	320	1	1,2,3,4,5,6 and 8	ESS/ EMS
Carlson Rezidor Hotel Group	529	3	7 and 8	Not Mentioned
Le Meridien Hotels	358	1	No initiatives undertaken	Not Mentioned
Total	3392	15		

Table 19 identifies that 8 out of 15 (53%) internationally owned properties have an ESA. Also, only one of the 15 internationally owned properties is without an ESP in place, and 8 of the 15 (53%) internationally owned properties indicate engagement with CSR. There is only one internationally owned property without an ESA, but, it has an ESS and EMS in place.

Table 20: Collective analysis of domestic and international hotel in Delhi

Variables	Domestic Hotels	International Hotels	Total
Total Number of Hotels	20	15	35
Total Number of Rooms	3480	3793	7273
ESS (eg:- ISO-14001)	7 *(35%)*	9 *(60%)*	16
EMS (eg:- EMAS)	7 *(35%)*	9 *(60%)*	16
ESA (eg:- GreenGlobe21 or LEED)	7 *(35%)*	8 *(53%)*	15
Internationally recognized ES certifications	7 *(35%)*	8 *(53%)*	15
Opting for green supplier for raw materials	8 *(40%)*	10 *(66%)*	18
Communicating the ES practices	9 *(45%)*	10 *(66%)*	18
Linen re-use encouraged	10 *(50%)*	11 *(73%)*	21
Environmental friendly practices	10 *(50%)*	11 *(73%)*	21
Recycling Programmes	10 *(50%)*	11 *(73%)*	21
Statement present, no initiatives listed	1 *(5%)*	1 *(6%)*	2
Corporate Social Responsibility (CSR)	6 *(30%)*	8 *(53%)*	14
No ESP initiatives undertaken	6 *(30%)*	1 *(6%)*	7

Table 20 allows a quantitative understanding of table 18 and 19. The following section provides a comparative analysis of both previous tables with a view to accomplishing the final research aim of the research i.e. to document the integrated environmental sustainability practices in Delhi's premium hotels.

Table 20 identifies 20 domestic hotel brands and 15 international properties in Delhi. The total number of rooms in Delhi's premium hotels amounts to 6872 with 52 per cent (3793 rooms) provided by international hotels and the remaining 48 per cent (3480 rooms) by domestic hotels. The market share for premium hotels with regards to available rooms is almost evenly distributed between the domestic and international hotel companies.

The findings show that 35 per cent of the domestic hotel brands employee ESS and EMS compared to a 60 per cent of international properties using ESS and EMS. Similarly, 35 per cent of domestically branded hotels have ESA while, 53 per cent of international

branded hotels have achieved ESA, indicating a greater propensity towards attaining third party accreditation for their environmentally sustainable practices.

Table 20 also indicates that of the 20 domestic properties six (30%) undertake no ESP's whereas, only one of the 15 (6%) international property indicated undertaking no ESP's. In conclusion, the above tables suggest that internationally owned properties show a greater inclination towards the integration of ESP's when compared against domestically owned properties.

6. Chapter – Discussion and Conclusion

The research objective was to establish the extent of change in the expectations of business travelers' attitudes towards environmental sustainability in Delhi hotels since 2007. The three research aims were:-

- To ascertain if there has been any change in the attitude of business travelers towards environmental sustainability since 2007 in Delhi premium hotels.
- To investigate the influence of environmentally sustainable practices on the business travelers selection of premium hotels and exploring the willingness of customers to pay extra for environmentally sustainable initiatives.
- To identify the current environmentally sustainable practices that premium hotels (4 and 5 star) in Delhi are undertaking.

6.1. Change in Attitude of the Business Travelers

The research of Manaktola and Jauhari in 2007 indicated that 77 per cent of the participants expect hotels to engage with environmental sustainability (ES). The findings of this research however indicated that, since 2007 both individual business travelers and their company's (87% of the population) expectations for hotels to be engaged with environmental sustainability have significantly increased. This confirms Penny, (2007), Carmody and Zeppel, (2009) and Southan, (2010) findings that there is good reason for hotels to integrate environmentally sustainable practices (ESP) into their operations. Interestingly, participants from the USA (85.7%) showed a stronger change in attitude towards ES in Delhi hotels compared to those from the UK and India. However, all participants, irrespective of their country of origin, indicated a strengthened attitude towards ES. Similarly, all participants indicated that their companies' expectations of hotel engagement of ES have also increased.

The results also imply that the level of awareness and knowledge among customers' has increased since Manaktola and Jauhari's (2007) research. This indicates that with increasing customer expectations it is important for hotels to clearly communicate their ES practices to stakeholders, which is a practice clearly supported by the literature (Goodman, 2000, Jones, 2002, Mensah, 2007, Tzschentke et al., 2008 and Kaul & Gupta, 2009).

6.2. Influence of Hotel Selection and Willingness to Pay Extra

6.2.1. Influence of choosing hotel

The findings of Manaktola and Jauhari (2007) research suggested that hotels in Delhi should have the following practices:-

- Communication of ESPs and the resulting effects on stakeholders.
- Possession of internationally recognized environmental sustainability such as EarthCheck or Green Globe 21.
- Include recycling programmes for efficient waste management.
- Encouragements of linen re-use to reduce water wastage.
- Placement of environmentally friendly products in the rooms.
- Finally, have an environmentally sustainable supply chain.

Manaktola and Jauhari's (2007) research also concluded that customers choose hotels based on either their environmental credentials, or acknowledged ESP's. The business travelers not necessarily stay in environmentally sustainable hotels or were not at all influenced by the ES credentials of a hotel (Manaktola & Jauhari, 2007). Yet, the practices that would influence hotel selection were properties possessing ESA's, trained employees and recycling programmes.

Of the 38 participants traveling to Delhi, the hotel selection is determined by the business traveler's employing firms in 55 per cent of the cases whereas, 42 per cent of the participants indicate that they (business travelers) choose the hotel themselves. However, 31 per cent of the participants indicated that they stayed in the same hotel as previous trips because it was convenient. The findings indicated that the participant's employing firms have a strong inclination towards hotels with ESP in Delhi thus, suggesting that businesses are undertaking the initiative of educating their employees about ES (Southan, 2010). This also suggests that many companies need to choose hotels with ESP's as a part of their supply chain in order to meet the needs of their own company's ES commitment or accreditations (Manaktola and Jauhari, 2007 and Sigala, 2008).

However, as remarked by two participants, hotel selection during a visit to Delhi can be biased by the seniority of the participant within their company. This suggests that lower-level employees may be directed by the firm about where to stay during their visit to Delhi. However, higher-level employees may be allowed to choose a hotel of their liking. Hence, this statement confirms the first research aim that looks to identify change towards environmental sustainability in hotels by business travelers and their company's.

6.2.2. Willingness to pay extra

The findings found that 79 per cent of participants are willing to pay extra for hotels in Delhi with ESPs. This suggests that even though the investment cost is high for placing ESPs in a hotel (Tzschentke et al., 2008) customers are willing to pay a premium for them. This provides the hotel with a competitive advantage (Sloan et al., 2009) over their competitors as well as with enhanced profit margins (Bohdanowicz, 2005 & Penny, 2007).

Moreover, the study by Manaktola and Jauhari (2007) indicated that respondents were prepared to pay a premium of only 4 to 6 per cent for premium hotels with ESPs. In contrast, the findings of this research indicate that 56 per cent of the respondents are prepared to pay a premium, which could be anything between 5 to 10 per cent. The findings further indicated that 26 per cent of the participants are willing to pay a premium of anything between 10 to 20 per cent for premium hotels with ESP. This suggests that Delhi's hotels can justify becoming more environmentally sustainable based on this increasing demand by business travelers and their companies are willing to pay extra for hotels adopting ESP's.

6.3. Environmentally Sustainable Practices in Delhi Hotels

The findings and discussion of the above two research aims have recognized that there is a demand for environmentally sustainable hotels from business travelers visiting Delhi. Despite the fact that, the hotel industry in India is experiencing great progress and Delhi is ranked as the third most visited city (Ministry of Tourism, India, 2012) currently there are 7 out of 35 properties with no ESPs (six domestic properties and one international).

The research indicates near equal market share on the basis of room number between international (52%) and domestic (48%) properties. Table 20 also identified that 9 of 15 (60%) international properties have an ESS and EMS as compared to 7 of 20 (35%) domestic properties, thus suggesting that international hotels' higher inclination towards employing ESPs. The international properties (53%) are not only contributing their resources towards environmental sustainability, but also towards the society as a part of the hotel's CSRs. This implies that international properties are working towards triple bottom line reporting more significantly than the domestic properties.

As a result, business travelers both as individuals and as companies, are more likely to choose an international property during their visit to Delhi due to their commitment towards ES. Although, 35 per cent of the domestic properties having ESP's accredited, enabling communication between the hotel and the customers (Ayuso, 2006, Luchsinger, 2009 & Sloan et al., 2009).

6.4. Implications of this Research

This research was not able to verify whether the premium hotels in Delhi have responded to the research conducted by Manaktola and Jauhari in 2007 by adopting ESP's to becoming more ES. However, this research does suggest that, business travelers have become more environmentally aware and are more conscious when choosing environmentally sustainable hotels. In addition, 79 per cent of these business travelers indicate that they are willing to pay extra for hotels with ESP which is a significant increase over the 40 per cent indicated in the study by Manaktola and Jauhari, (2007). The implication for Delhi's premium hotel industry is that for hotel's whose main clientele are business travelers directing investment towards integration of ESPs can be justified as there has been an indicated increase in the expectations of the business travelers.

6.5. Limitations and Future Research

This research is limited by the lack of diversity of the participants i.e. only business travelers have been taken into consideration instead of general customers and the limited responses. The participants are also chosen from specific locations USA, UK and rest of India which is a limitation, along with the subjectivity of the participant responses. Future research could include a study to understand the change in the general hotel customers' attitude towards environmental sustainability as this aspect has not been explored in previous studies.

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8. Apendix

Participant Information Sheet

AUT UNIVERSITY
TE WĀNANGA ARONUI O TAMAKI MAKAU RAU

Date Information Sheet Produced:
27th November, 2012

Project Title
Has expectations for environmentally sustainable hotels by corporate travellers to Delhi changed since 2007?

An Invitation
My name is Adit Chopra. I am an international student at Auckland University of Technology in Auckland, New Zealand. I am in the process of completing my Master's degree in International Hospitality Management. The research topic for my dissertation is mentioned above. I cordially invite you to participate in this research.

What is the purpose of this research?
The research aims at replicating the demand for environmentally sustainable 4 and 5 star hotels in Delhi from the research completed by Manaktola and Jauhari in 2007; as well as, to benchmark the supply from a hotels perspective regarding the various products and services which are environmentally sustainable in nature.

How was I identified and why am I being invited to participate in this research?
This is an open invitation. You can participate in this research if you frequently visit Delhi for work and stay at either of the 4 and 5 star hotels. Mostly, corporate clients are the type of customers who frequent Delhi and use the 4 and 5 star hotels. I am trying to establish what influences your choosing environmentally sustainable hotels during your visit to Delhi.

What will happen in this research?
After responding to the information sheet and the consent form, an online survey link would be emailed to you. This survey would require answering 12 questions mostly multiple choices, which would take no more than 10 to 15 minutes. The data from the completed survey will then be collated, analyzed and used for my Master's dissertation, which will allow me to complete my research and obtain the Master's certification.

What are the discomforts and risks?
No risks or discomforts have been anticipated for you.

How will these discomforts and risks be alleviated?
As mentioned above no risks and discomforts have been anticipated, hence need to alleviate is not expected to arise/ is unlikely.

What are the benefits?

The purpose of this research is to gain my Master's qualification. It will also be a subject for a conference paper and the findings will be published in academic journal articles. As a participant, you would benefit from being able to communicate your knowledge on the subject of environmental sustainability and how this knowledge influences your purchasing behaviour. Findings will allow better understanding of the environmentally sustainable practices being employed by hotels and customers perception of the same.

How will my privacy be protected?

Any form of communication between you and me would be kept confidential. You will be given a number or pseudonym for representation during the analysis of the data. All data will be stored securely and disposed of through a confidential disposal service.

What are the costs of participating in this research?

No costs for participation are involved.

What opportunity do I have to consider this invitation?

The consideration time frame for acknowledging the invitation is 14 days.

How do I agree to participate in this research?

You agree to participate in this research by sharing your email address with me at adit_chopra@hotmail.co.uk. I can then email to you the consent form to confirm your participation.

Will I receive feedback on the results of this research?

Yes, you can request the results of this research by ticking the option for requesting feedback on the consent form.

What do I do if I have concerns about this research?

If you have any concerns about this research with regard to the various theories, terminologies etc., you can contact me at adit_chopra@hotmail.co.uk or call me at +64 – 02108278955.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Dr Rosemary Godbold, *rosemary.godbold@aut.ac.nz*, 921 9999 Ext 6902.

Whom do I contact for further information about this research?

Researcher Contact Details:

Adit Chopra

Email id: adit_chopra@hotmail.co.uk

Phone Number: +64 – 02108278955.

Project Supervisor Contact Details:

Warren Goodsir and Monique Brocx

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Phone Number: +64 9 921 9999 Ext: 8374 and +64 9 921 9999 Ext: 5818.

Approved by the Auckland University of Technology Ethics Committee on *30th January, 2013*, AUTEC Reference number *12/333*

8.1. Research Questionnaire

Expectations for environmentally sustainable hotels in Delhi

Q1. Please tick your expectations as a corporate guest towards environmentally sustainable practices in hotels in general.

	must have (1)	expect (2)	nice to have (3)	not looking for (4)	don't expect (5)	no opinion (6)
Internationally recognized environmental certifications (eg: ISO 14001, Earth Check, Planet 21, LEED) (1)	❍	❍	❍	❍	❍	❍
Opting for green suppliers for raw materials and recreational services (2)	❍	❍	❍	❍	❍	❍
Communicating the environmentally sustainable practices (3)	❍	❍	❍	❍	❍	❍
Option for linen re - use to reduce water usage (4)	❍	❍	❍	❍	❍	❍
Environmentally friendly practices (5)	❍	❍	❍	❍	❍	❍
Recycling programs (6)	❍	❍	❍	❍	❍	❍

Q2. Please tick your expectations as a corporate guest towards environmentally sustainable practices in hotels in Delhi.

	must have (1)	expect (2)	nice to have (3)	not looking for (4)	don't expect (5)	no opinion (6)
Internationally recognized environmental certifications (eg: ISO 14001, Earth Check, Planet 21, LEED) (1)	❍	❍	❍	❍	❍	❍
Opting for green suppliers for raw materials and recreational services (2)	❍	❍	❍	❍	❍	❍
Communicating the environmentally sustainable practices (3)	❍	❍	❍	❍	❍	❍
Option for linen re - use to reduce water usage (4)	❍	❍	❍	❍	❍	❍
Environmentally friendly products (5)	❍	❍	❍	❍	❍	❍
Recycling programs (6)	❍	❍	❍	❍	❍	❍

Q3. Are you and/ or your company willing to pay more for environmentally sustainable hotels? If 'NO' please skip the next question

❍ Yes (1)

❍ No (2)

Q4. How much more (percentage) are you and/ or company willing to pay extra for environmentally sustainable accredited hotel? Please specify the percentage.

Q5. What influence do you have on the purchasing decision for hotel in Delhi during your visit? Please tick which applies the best.

	none at all (my company decides) (1)	some influence (2)	totally my decision (3)	stay at the same place because I like the hotel in general (4)	other (5)
Your influence on purchasing hotel in Delhi (1)	❍	❍	❍	❍	❍

Q6. Has your personal outlook on environmental sustainability changed or enhanced when compared with the year 2007 to the present day? Please tick which applies the best.

	extremely (1)	very much (2)	moderately (3)	slightly (4)	not at all (5)	no opinion (6)
Change in personal outlook on environmental sustainability, 2007 to 2012. (1)	❍	❍	❍	❍	❍	❍

Q7. Has your company's outlook on environmental sustainability changed or enhanced when compared with the year 2007 to the present day? Please tick which applies the best

	extremely (1)	very much (2)	moderately (3)	slightly (4)	not at all (5)	no opinion (6)
Change in your company's outlook on environmental sustainability,	❍	❍	❍	❍	❍	❍

2007 to 2012 (1)						

Q8. Does your company have any "green" certifications for example ISO 14001, Planet 21, LEED or Green Seal? Please tick which applies the best.

	Yes (1)	No (2)	Pending (3)
State of "green" certifications of your company (1)	❍	❍	❍

Q9. Your country of residence

	United Kingdom (UK) (1)	United States of America (USA) (2)	India (3)	Other (4)
Country of residence (1)	❍	❍	❍	❍

Q10. Usual purpose of visit to Delhi.

	Business (1)	Holiday (2)	Visiting friends and relatives (VFR) (3)	Other (4)
Your purpose of visit (1)	❍	❍	❍	❍

Q11. Number of trips to Delhi in the last 12 months

Q12. Please specify your age.