

A STUDY OF MANAGEMENT OF GREEN/ENVIRONMENT-FRIENDLY
PRACTICES CARRIED OUT BY TWO TO FIVE STAR CATEGORY
HOTELS AND RESORTS IN PUNE REGION
(PERIOD OF STUDY 2002 TO 2012)

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Submitted By

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Under the Guidance of

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April 2017

GUIDE CERTIFICATE

This is to certify that the thesis entitled '**A study of management of green/environment-friendly practices carried out by two to five star category hotels and resorts in Pune region (period of study 2002 to 2012)**' which is being submitted herewith for the award of the Degree of Vidyavachaspati (PhD), in Management, of Tilak Maharashtra Vidyapeeth, Pune, is the result of original work completed by Mrs. Prachi Samit Navare under my supervision and guidance. To the best of my knowledge and belief the work incorporated in this thesis has not formed the basis for the award of any Degree or similar title of this or any other University or examining body upon her.

Research Guide: Dr. Sanjay R Mali

Place: Pune

Date: 22nd April 2017

DECLARATION

I hereby declare that the thesis entitled '**A study of management of green/environment-friendly practices carried out by two to five star category hotels and resorts in Pune region (period of study 2002 to 2012)**' completed and written by me has not previously formed the basis for the award of any Degree or other similar title upon me of this or any other Vidyapeeth or examining body.

Prachi Samit Navare

Place: Pune

Date: 22nd April 2017

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ABSTRACT

“A study of management of green/environment-friendly practices carried out by two to five star category hotels and resorts in Pune region (period of study 2002 to 2012)”

The hospitality industry is one of the biggest industries in the world. Hotels offer accommodation, restaurants, spa and wellness services, bars, restaurants, clubs and entertainment services, round the clock, for all the days of the year. This has a high environmental impact in terms of pollution, waste generation and greenhouse gases.

The movement towards sustainability has expanded across the globe, in all fields. Government & Non-Government organizations, corporations, as well as consumers are increasingly focusing on the need to exist in harmony with their surroundings, and reduce their environmental footprint. The concept of sustainability has begun to gain momentum in the hotel industry as well.

Modern day travelers have become conscious about their carbon footprint; and are increasingly being drawn to stay in hotels, which are environment conscious. Hence today, we find that a lot of hotels are incorporating green practices in their day to day operations, to cater to the need of these travelers, as well as to do their bit, for the environment.

Pune city is one of the most important cities in State of Maharashtra. There are a lot of corporates & business travellers stopping over for a few days. There have been many star category hotels belonging to multinational groups that have come up in Pune region in the new millennium.

This Study presents how green practices are managed by hotels and resorts in Pune region.

This study focuses on the following objectives & seeks to find out-

1. The extent of implementation of green practices in the hotel industry today.
2. The management involvement in implementation of these practices in two to five star hotel and resorts in Pune Region.
3. The various types of green /eco-friendly practices carried out in all operating

departments of the hotel such as Front Office, Housekeeping, Kitchen and Food & Beverage Service, as well as the allied areas.

4. Whether any special kind of training is given to the hotel staff to carry out these initiatives.
5. The degree of costs involved in implementing these practices initially.
6. Whether this investment in implementing these practices is justified, in terms of CSR initiatives, turnover & popularity of the hotels.
7. If in the long run, these initiatives end up being cost effective for the hotel operations, on the whole.
8. Whether the implementation of such practices is a deciding factor for customers to stay at such properties.
9. If there is government support for such kinds of environment-friendly initiatives carried out.
10. The various certifications existing for such practices globally as well as within the country and the number of hotels in this study that are aware of these and have applied for such certifications.
11. The effect of conducting such practices on the overall performance of the hotels.

The following five hypotheses are used to complete the research-

First hypothesis

The research analyses whether two to five star hotels and resorts in Pune have started implementing Green or Environment-friendly practices in their daily operations. It brings out how many hotels and resorts out of the ones surveyed are actually going green.

Second hypothesis

This studies whether the overall performance of the hotels has been positively affected after implementing these practices. This is in terms of reducing operating costs in hotels and resorts where green practices are implemented.

Third hypothesis

This investigates whether implementing such practices in hotels involves substantial costs, in terms of initial investment and recurring expenses.

Fourth hypothesis

This analyses if customers/guests staying in properties following green/eco-friendly practices are willing to participate in these initiatives.

Fifth hypothesis

This studies if customers/guests who stay in hotels are willing to pay extra money to be able to stay in hotels following green practices.

Chapter 1-Introduction

This chapter gives an overview of the hotel industry and its history in the world, major developments in America, Europe and India. It also explains the background of green practices in the hotel industry, and then relates these practices to Indian hotels and more specifically those in Maharashtra and Pune region. There is also a justification presented as to why the researcher chose to focus this study in Pune region. This chapter briefly touches on a few of the more known green hotel certifications that a hotel can apply for.

Chapter 2-Literature Review

This chapter traces previous studies on green or eco-friendly practices in Indian and international hotels. There is no specific review of green practices carried out in hotels in the Pune region. Hence general articles on green practices in hotels have been considered for study.

Chapter 3-Research Methodology

In this chapter, the methodology used for this particular research is covered. The various objectives of this research are stated, along with the hypothesis. Also the research design diagram (proposed model of research methodology) used to direct this research is mentioned. A pilot study was conducted, which helped to finalize the questionnaires.

There were three different questionnaires which were used while interviewing the different categories of respondents; namely- hotels, guests and travel agencies in Pune region.

Steps in Proposed Model of Research Methodology

1. Review of Literature
2. Pilot Study
3. Defining of Objectives
4. Formulation of Hypothesis
5. Sampling
6. Finalization of Questionnaires
7. Data Collection
8. Data Analysis & Testing of Hypothesis
9. Significance of Research

Chapter 4-Data Analysis and Interpretation

This chapter covers the analysis and interpretation of data that was collected through the interviewing the respondents and administering questionnaires. The tests used for this process are explained and the formulae used are mentioned. This chapter is divided into sections as per each questionnaire being analyzed.

Responses for every question in each questionnaire are analyzed and presented using a table and its resulting graph per question. This data is further used to test the hypothesis. Also, the co-relation or association of questions to logically reach certain findings was done, using the relevant test.

Tests used for data analysis-

1. Percentage
2. Mean, Median
3. Kruskal Wallis Test
4. Chi square Test for testing the significance of percentage

Test used for hypothesis testing

1. One sample proportion test.

A *p* value of 0.05 or less was considered significant.

The hypothesis are tested as follows-

H₁. “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”

For the purpose of testing this hypothesis, there were three ways in which this hypothesis was defined-

1.The Null hypothesis (H_{01a}) and Alternate hypothesis (H_{11a}) were defined as under-

H_{01a}. Majority of the hotels and resorts do not follow eco-friendly practices in daily operations.

H_{11a}. Majority of the hotels and resorts follow eco-friendly practices in daily operations.

2. H_{01b}. Majority of the hotels and resorts do not have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues.

H_{11b}. Majority of the hotels and resorts have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues.

3.H_{01c}. Majority of the hotels and resorts do not feel the necessity of having training

programs conducted for implementation of green practices.

H_{11c}. Majority of the hotels and resorts feel the necessity of having training programs conducted for implementation of green practices.

Rejection of Null hypothesis and acceptance of Alternative hypothesis indicates that majority of the hotels and resorts in Pune region follow eco-friendly practices in daily operations, have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues and feel the necessity of having training programs conducted for implementation of green practices.

So, we accept H₁.

H₂. “The overall performance of the hotels has been positively affected after implementing these practices.”

For the purpose of testing this hypothesis, the Null Hypothesis (H₀₂) and Alternate Hypothesis (H₁₂) were defined as under-

H₀₂. Majority of the respondents think that the overall performance of the hotels has not been positively affected after implementing these practices.

H₁₂. Majority of the respondents think that the overall performance of the hotels has been positively affected after implementing these practices.

Rejection of Null hypothesis and acceptance of Alternate hypothesis indicates that majority of the respondents think that the overall performance of the hotels has been positively affected after implementing these practices.

So we accept H₂.

H₃. “Implementing such practices in hotels involves substantial costs”.

For the purpose of testing this hypothesis, there were two ways in which this hypothesis was defined-

1. The Null Hypothesis (H_{03a}) and Alternate Hypothesis (H_{13a}) were defined as under-

H_{03a}- Majority of the hotels do not incur expenditure annually for implementation of these practices

H_{13a}- Majority of the hotels incur expenditure annually for implementation of these practices

2. The Null Hypothesis (H_{03b}) and Alternate Hypothesis (H_{13b}) were defined as under-

H_{03b}- Majority of the hotels have not made initial investment at the time of construction of the property for environment-friendly norms.

H_{13b}- Majority of the hotels made initial investment at the time of construction of the property for environment-friendly norms.

Acceptance of Null hypothesis and rejection of Alternate hypothesis indicates that majority of the respondents do not incur annual expenditure for the implementation of these practices and also have not made initial investment at the time of construction of the property for environment-friendly norms. This further indicates that majority of the hotels feel that implementing such practices in hotels does not involve substantial costs.

So, we reject H₃.

H₄. “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these initiatives.”

For the purpose of testing this hypothesis, the Null Hypothesis (H₀₄) and Alternate Hypothesis (H₁₄) were defined as under-

H₀₄- Majority of the “Customers/Guests staying in properties following green/eco-friendly practices are not willing participants in these initiatives.”

H₁₄- Majority of the “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these initiatives.”

Acceptance of Null hypothesis and rejection of Alternate hypothesis indicates that majority of the Customers/Guests staying in properties following green/eco-friendly practices are not willing participants in these initiatives.

So, we reject H₄.

H₅. “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.

For the purpose of testing this hypothesis, the Null Hypothesis (H₀₅) and Alternate Hypothesis (H₁₅) were defined as under-

H₀₅. Majority of the Customers/Guests are not willing to pay extra money to be able to stay in hotels following green practices.

H₁₅. Majority of the “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.

Acceptance of Null hypothesis and rejection of Alternate hypothesis indicates that majority of the respondents are not willing to pay extra money to be able to stay in hotels following green practices.

So, we reject H₅.

After testing of all hypotheses, the results are summarized in the table below.

Summary of Hypothesis Testing-

Sr No	Hypothesis	Accept/Reject
1.	H₁. “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”	Accept
2.	H₂. “The overall performance of the hotels has been positively affected after implementing these practices.”	Accept
3.	H₃. “Implementing such practices in hotels involves substantial costs”	Reject
4.	H₄. “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these	Reject

	initiatives.”	
5.	<u>H₅</u> . “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.	Reject

Chapter 5-Findings, Suggestions and Recommendations

This chapter presents the findings from this study in three parts- from Hotels, Guests and Travel agencies.

Suggestions and recommendations for hotels and decision-making bodies like the State Government and Mahratta Chamber of Commerce and Industries are presented.

Chapter 6-Conclusions

This chapter summarizes the conclusions arrived at during the course of this study. Although most hotels from Pune region that participated in this survey; as well as guests were aware of green practices, not many implement them or participate in them completely.

Implementing green practices in hotels will help to conserve the environment, and also help the hotels save money over a period of time, thus adding to their profits.

CHAPTER 1

INTRODUCTION

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1.1. THE HOSPITALITY INDUSTRY

The hospitality industry can probably be termed as one of pioneering commercial undertakings of this world. It is part of the larger business initiative- the tourism industry. This industry supplies a gamut of services ranging from travel arrangements, accommodation facilities, food & beverages to leisure activities; i.e. all requirements of the modern day traveller, who could be travelling for business, pleasure, vacation, adventure, religious purpose or medical treatment.

The term ‘Hospitality’ means the cheerful welcoming of people, who may be known or may be strangers. It is the relationship between a guest and host. The hospitality industry is a service industry. According to Swain & Mishra (2011) the hospitality business is based on the culture of serving guests with warmth and care so that they feel comfortable and secure. They have also stated that hospitality is the fundamental need for travellers, pilgrims, wanderers, tourists etc. because it gives them a strong feel of ‘home away from home.’

From the beginning, hospitality has been an important element in enriching experiences of guests through its consistent service quality. They further elaborate that it includes hotels, resorts, restaurants, houseboats, catering establishments, bed and breakfast outlets, casinos, clubs, lounges and bars.

As per British law, a hotel is a place where a bonafide traveller can get food and shelter, provided he is able to pay for it, and is in a fit condition to be received. Here, the products being sold are perishable and intangible. A hotel is thus a commercial

establishment that provides accommodation, meals and other services to the guests. Hotels range from economical or limited service, to those providing world class services.

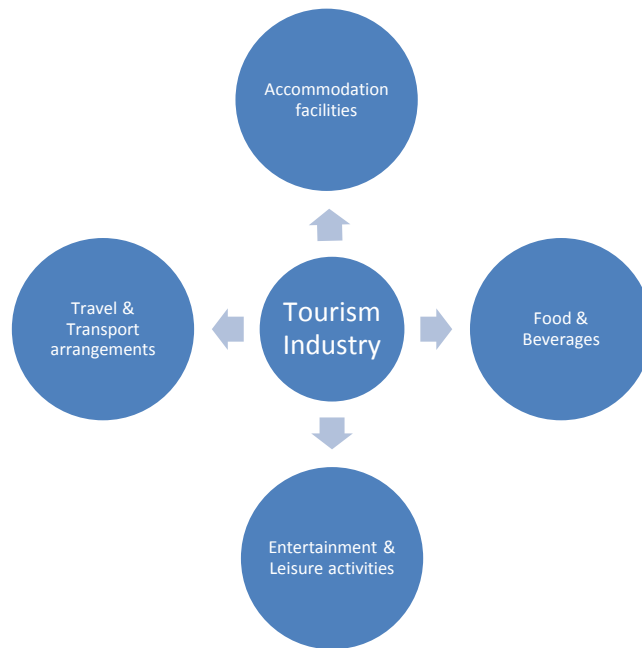
Tewari (2009) stated that in general to be called a hotel, an establishment must have a minimum of six guest rooms, at least three of which must have attached private bathroom facilities. Hotels are also classified as per the star rating system, ranging from one star to five star, with the number of facilities increasing with every star. This system of classification is accepted throughout the world, and ratings of hotels in the various countries are done by the government, independent rating agencies, or sometimes by the hotel operators themselves.

Restaurants are institutions that serve food and beverages to guests. These range from economy style dining halls, to fast food outlets, to takeaways, to expensive fine dining restaurants based on a particular theme.

This industry is one of the largest and most rapidly growing industries in the world, and is influenced by ups and downs in the economy. Global occurrences, such as the terrorist attacks on the World Trade Centre in the United States of America on 11th September 2001, bombing of a hotel in Bali, Indonesia on 12th October 2002, a tsunami in South and South-East Asia on 26th December 2004, terrorist attacks on the Taj Mahal and Oberoi hotels in Mumbai, India on 26th November 2008, all of which saw a massive loss of human life, have had a negative impact on the hospitality as well as tourism industry. In Pune region, after the German Bakery bomb blast in 2010, for some time there was a dip in the tourist arrivals.

The hospitality industry generates a lot of employment all over the world, directly as well as indirectly for example guides and escorts, suppliers and sellers of local handicrafts. It also brings a lot of valuable foreign exchange, as people who travel to other countries spend money on accommodation, transport, shopping, sightseeing etc.

Fig 1-1 Components of the Tourism Industry



1.2. GROWTH AND DEVELOPMENT OF THE HOTEL INDUSTRY AROUND THE WORLD

The development of the travel and tourism industry played a major role in the origin, growth and development of the hospitality industry. As mentioned above, people travel from one place to another for a variety of reasons such as commercial, personal, to visit friends and relatives, for recreation, educational purpose, or some kind of religious activity or to get access to quality health care facilities. If people travel for a few days, it is not possible for them to carry their food and a place to shelter along with them. So, this necessity is taken care of by the hospitality industry. Thus, hospitality services and tourism services are dependent on each other.

In the ancient times, the common mode of transport for men comprised of animals like horses and camels. For security reasons, they would travel in groups called caravans; and would stay put at a particular destination during the night, to avoid being looted as well as for protection from wild animals. Due to the animals getting tired, there were constraints on the distance that was being covered by them during day time. So, a place that offered water, food and safety was their main anchor for the night halt.

The concept of inns and lodging houses came into being to satisfy this need of the travellers. The earliest recorded inns were in 500 years B.C. They were the earliest form of hospitality service. Swain & Mishra (2011) stated that the term 'inn' is derived from the word 'malon' signifying a resting place for the night'. Such inns and lodging houses were known as taverns & inns in Europe, ryokans in Japan, dharamshalas & sarais in India, cabarets and hostelries in France, katalumas in Greece. They were created in the homes of the local people, who made their living by providing accommodation and other services.

Inns at first were usually managed by families, or husband- wife teams who offered large halls to travellers to sleep, in the beginning with many beds, like modern dormitories. They also had stable facilities for the animal, for feeding, watering & to rest for the night. Simple homely fare was offered to the visitors as refreshments, at an additional charge. Changing travel patterns resulted in upgrading of facilities. However, there were no high standards of cleanliness or hygiene, as is evident in the modern day hospitality industry.

Religious tourism was popularized during the Middle Ages. Churches started maintaining guest houses for pilgrims. Temples and monasteries too started providing the facility of overnight stay to pilgrims. The Muslim rulers constructed buildings in the vicinity of mosques for travellers.

Eventually roads developed on a grander scale in around the third century A.D. and horse-pulled carriages came into existence after the invention of the wheel. Large towns and cities evolved and all this led to frequent travel between destinations. People who ran inns realized that this business would yield high returns over a period of time and started constructing large guest houses for providing accommodation to travellers.

Men started travelling for trading purpose in around the fifteenth century A.D and looked for safe venues where they could rest during their long voyage. These were merchants and were not satisfied with plain inns and their simple fare; they wanted something more luxurious with delicacies for the palate. With the beginning of the seventeenth century A.D comfortable and hardy carriages were routinely used for travelling longer distances, with frequent stops at roadside inns. These inns by now had evolved into good places of accommodation where the guests could relax in a safe

environment and were operational round the year. They had become more spacious and looked after the privacy of the guests. The dormitories gave way to individual bedrooms with basic furniture.

Gradually, vertical buildings were constructed and it became commonplace to have a parlor kind of a room on the ground floor to receive guests and offer them food and beverages, with bedrooms on the higher floors. Monasteries and churches too upgraded their lodging facilities in order to cater to their visitors in a better way.

In the eighteen century A.D, travel by stagecoaches became one of the most preferred modes of transport for the upkeep of roads and bridges, tollgates were put in place and travellers using that particular stretch of road had to pay a fixed amount of money. They rubbed shoulders with the locals at the inns, who would drop in for refreshments.

With the development of the railway services and steamships, after the Industrial Revolution in England, road travel became less popular. Travellers preferred travelling by train as it was more convenient, quicker and safer, hence the volume of business of inns reduced. A few were closed down, while others changed their product in order to suit the local market, and became taverns. Soon, more and more towns and cities developed due to better connectivity by railway, and hotels started being constructed near the railway stations.

1.2.1. GROWTH OF INDUSTRY IN EUROPE

The early history of accommodation for travelers in Europe can be traced back to the Greek word 'Xenia', which encompassed hospitality as well as shelter given to a traveler from discomforts. It decreed that the city was bound to offer hospitality. However, in the city of Sparta, the severe customs did not encourage visitors, still the goddess Athena was considered to be the protector of any outsiders, and so she was known as 'Xenia Athena'.

In the early period, diplomats, philosophers, intellectuals and researchers were the main travelers. Noblemen invited guests to come and stay with them. There were buildings known as 'Leonidio' constructed in the 4th century.

The Greek put up thermal baths in villages that were meant for relaxation and convalescence. The Romans constructed lodges for use by government officers when they travelled on business.

Structured hotel business probably first originated in Europe, especially Switzerland, the patrons of which were the noblemen of that era. In the fifteenth century, France & England started having legal requirements governing hotels like keeping a register. Inns in England also became famous for their hospitality around this time, which had rooms off a courtyard on both sides and public rooms in front. Hotels started advertising their special gastronomical offerings using special signboards outside their properties.

During the end of the 1600's there were stagecoaches that started operating at fixed intervals in England. As mentioned earlier, the Industrial Revolution in the 1760's enabled the proliferation of hotels.

It was in the early 1800's that the Royal Hotel opened in London, and resorts came up on the Riviera in France, (at Monte Carlo, Nice and Cannes) followed by the Italian Riviera.

The 'Grand Tour' of Europe- a concept that emerged in the second half of the eighteenth century was very helpful to the development of the hotel industry of this time, especially in Italy, France, Germany, Austria, Switzerland and Ireland. Heirs of rich British families and aristocracy were sent on this tour, which often lasted for up to a few years and required lodging, transport and entertainment facilities. It was a precursor to the modern day hospitality industry.

Tewari (2009) says that a few of the hotels that came up in this period include the Dolder Grand in Zurich, The Imperial in Vienna, the Vier Jahreszeiten in Hamburg and Des Bergues in Geneva. The world's first tour operator was Thomas Cook, a British cabinet maker and part-time publisher, who organized an excursion of eleven miles from Leicester to Loughborough by rail transport in 1841, and thus gained this title. He later started a travel agency that offered package tours throughout Europe to tourists, by coordinating with the railways and steamship companies. His company too played a vital role in the expansion of the travel business throughout the world.

After the invention of air transport and commercial passenger flights, international travel received a boost, as tourists started travelling longer distances and stayed at destinations for a longer period of time. They started travelling across the Atlantic Ocean. This resulted in greater turnover for both the hospitality, as well as the tourism industry. The needs of leisure as well as travellers increased and they demanded better facilities, which led to the building of large hotels in cities and towns to satisfy them.

The world's first ski resorts opened in the Swiss towns of St. Moritz & Gstaad in the early 1920's, which saw a lot of foreign tourists making their way to these places.

This was followed by the emergence of destinations like Spain, Greece & Yugoslavia, as well as Portugal and the Scandinavian countries as popular tourist destinations.

1.2.2 GROWTH OF THE INDUSTRY IN AMERICA

In early times, the lodging facilities in America were based on European-style taverns. Later on, it was the American businessmen who caused a transformation in the perception of hotels, due to their revolutionary concepts and strong marketing skills. The 73 room City Hotel opened its doors to the public in New York in 1794, and it was precursor to today's hotel industry. This was followed by the Exchange Coffee House in Boston, the second City Hotel in Baltimore and the Mansion house in Philadelphia. The Tremont House in Boston was launched as a luxury hotel with 170 rooms having modern conveniences and was the first to offer running water, indoor plumbing and bathing facilities, as well as front office facilities like reception and bell boys. Hotels started operating around city centres.

The nineteenth century saw the launch of more luxury properties like Grand Pacific, the Palmer House, The Sherman House in Chicago and the 800 room The Palace in San Francisco. The 450 room Statler Hotel in Buffalo, New York was the first business hotel, which commenced operations in the year 1908.

The hotel industry continued to flourish for the next few years, till the Great Depression hit America in the 1930s, which saw a lot of owners being forced to sell their hotels in order to stay afloat. In the 1940s again the industry started picking up.

Travelling reduced after the Second World War due to wide-spread destruction and economic melt-down, but slowly regained its fascination among people in the 1950s. Road transport improved with the construction of highways, leading to hotels on highways, called as motels. Tourists started visiting seashores, mountains, hills, rivers and lakes, for pleasure and to spend vacations, which led to the creation of resorts at these venues.

Motels grew at a rapid rate in the next few decades and budget hotels providing limited facilities at lesser rates came into existence. All these developed into country-wide and international chains.

In the 1970's, hotels started being built exclusively for business people. i.e. business hotels. They started presenting a larger number of facilities, as well as a greater variety of cuisines to the discerning travellers.

In the 1980's and the 1990's, this development continued unhindered, with more and more properties opening up, offering a plethora of services. At a certain point of time however, the events occurring in Middle East Asia i.e. the Gulf war adversely impacted the hotel business. It was at this time that hoteliers started coming up with innovative marketing strategies like tie-ups with airlines to have 'frequent flier programmes' to increase their business.

Today there are various types of hotels; apart from resorts and motels. Airport hotels are located near the airports. Business hotels are located near the commercial centers of cities. Heritage hotels are those that have been converted from erstwhile castles, palaces and forts, built before 1950. Apartment hotels have suites with kitchen facilities, where the guests can make their own food. Casino hotels are those that have gambling facilities on the premises. Convention hotels have plenty of space to hold large gatherings and conferences. Timeshare properties are those properties that sell ownership to an individual for a specific part of the year.

1.3. HISTORY, GROWTH AND DEVELOPMENT OF THE HOTEL INDUSTRY IN ASIA

Asia is a vast continent, the largest amongst all the continents in this world. It is a large land mass, with about 50 different countries. Some of these are amongst the most popular tourist destinations of this world, and include Japan, China, India, Malaysia, Sri Lanka, the Gulf countries of the mid-east such as Israel, Jordan, Dubai, Oman etc. Sri Lanka, Thailand, Singapore, Indonesia etc. today witness high tourist traffic.

But, how did it all begin?

In the middle-ages, caravan-serais were built in the mid-east for resting-places for caravans. In the 1200's, China and Mongolia had staging posts that were constructed for travellers and the benefit of couriers. As the hotel industry developed around the world, so did it develop in Asia, with traditional inns known as Ryokans that came up in Japan. After this period not much is known in detail.

In 1869, the Suez Canal opened, and with it, travels to Asia from Europe started on a large scale, with the arrival of steamships. The Eastern & Oriental Hotel, with more than a 100 rooms was built in Malaysia, at Penang. At around the same time, the colonial-style Raffles hotel was constructed in 1880's in Singapore, named after Stamford Raffles, the founder of modern-day Singapore. Both of these were constructed by four Armenian brothers. They later on acquired The Strand, which was built in Rangoon, Burma (today known as Yangon, in Myanmar) by a British gentleman. All these hotels primarily catered to the British officers in the colonial times.

In China, before the 1970's travel was only done by government officials. It was only after this period that modern-day hospitality business started developing with the construction of hotels, resorts, rest-houses etc.

In the 1970's with the emergence of the middle-eastern countries as the main suppliers of petroleum in the world, there was tremendous increase in business travel to these destinations. To cater to the upsurge in the number of visitors, more and more hotels started coming up in the cities of Dubai, Abu Dhabi etc.

In the 1980's in Turkey, the Sultan's Ciragan palace in Istanbul underwent massive revamping and restoration in order to be converted into a hotel, which commenced operations in 1991 as part of the Kempinski Chain.

In the 1990's in Dubai, the Burj Al Khalifa was built, a super-luxurious hotel, standing on a man-made island, and one of the greatest attractions of the city today.

1.4. HISTORY, GROWTH AND DEVELOPMENT OF THE HOTEL INDUSTRY IN INDIA

The hotel industry in India existed even in the era of the Indus Valley Civilization as people travelled then primarily for the purpose of trade as well as religious pilgrimages. The old texts and literature, including Hindu mythology has references to provision of accommodation and food to travellers. India was famous for gold, precious stones, spices and silks and trade existed with countries like Malaysia, China, Japan, Greece and Italy. Travellers used animals for covering distances on land and boats to cross seas and rivers.

Tewari (2009) stated that the history, growth & development of the hotel industry in India can be studied on the basis of three definite eras-

1. The Ancient & Medieval Era- which existed from the days of the Indus Valley Civilization to up to the 1600's.
2. The Colonial Era- when the British ruled India which lasted up to 1947.
3. The Modern Era- which existed from the year 1947 onwards, after India gained independence.

1.4.1. THE ANCIENT PERIOD

Ancient Indian philosophy says that 'atithi devo bhava' which means that the guest is god. Though there was no organized hospitality industry in India at that time, travellers and guests got accommodation in lodging houses known as 'dharamshalas'. Famous Chinese scholars like Fa Hien & Huan Tsang who visited the country during the rule of Chandragupta Vikramaditya & Harshvardhana respectively spoke about the presence of lodging facilities for travellers. Huein Tsang specifically mentioned the facility of providing food to 10,000 students at the Nalanda University, which was a world famous centre of learning.

The Muslim rulers of the medieval era, between the eleventh & thirteenth centuries, constructed musafir khanas & sarais where messengers of the postal service could rest. Allaudin Khiljee was instrumental in starting dak chowkies for postal delivery using horse runners.

The Mughal emperors built sarais for travellers that gave them shelter, provided water and stables for the animals. Till this day, Delhi bears testimony to the fact, proved by the existence of localities named Katwaria Sarai, Lado Sarai etc to name a few.

1.4.2. THE COLONIAL PERIOD

However, the Indian hotel industry, a precursor of modern day hospitality is said to have started developing in the seventeenth century, after the Europeans arrived. At that time, it was the foreigners who themselves started running hotels for the Europeans as well as the British rulers. The Racquet Court and the Portuguese Georges were the earliest hotels that opened in Mumbai, Maharashtra, (known as Bombay at that time) in the 1800's.

The Victoria hotel, also known as the British hotel was a famous property of that era. Watson's, which catered exclusively to the Europeans & the Auckland Hotel in Kolkata were some other famous properties.

It was in 1903 that the Taj Mahal Palace & Tower opened its doors to the public in Mumbai. It was built by Mr. Jamshetji Tata after he was not allowed to enter Watson's Hotel, as he was an Indian. This was the first luxury hotel for Indians, started by an Indian and is amongst the country's best hotels till date, a landmark in Mumbai and remains one of the places that a tourist in Mumbai must visit on his trip to the financial capital of the country.

Mr. Shapurji Sorabji built the Grand Hotel in Mumbai in 1923.

The Oberoi group of hotels was founded in the 1930's by Mr. Rai Bahadur Mohan Singh Oberoi, took over the Cecil Hotel Shimla that was once owned by a European.

1.4.3. THE MODERN PERIOD

After the British formally left India the hotel industry continued to flourish rapidly. The Taj and Oberoi groups that were already present on the scene continued their rise by taking over properties that had been set up by the erstwhile colonial masters and expanded their business overseas as well. In the 1970's the ITC (Indian Tobacco Company) group entered the hotel industry after forming the ITC Welcomgroup, with the Sheraton Chola at Chennai (then known as Madras). Today the brand is known for

its tagline of ‘Responsible Luxury’ and is one of the most environment-friendly hotel brands in the country.

Regional hotel and restaurant associations came up in 1949 with head offices in New Delhi, Mumbai (Bombay), Kolkata (Calcutta) and Chennai (Madras), which formed the Federation of Hotel and Restaurant Association of India (FHRAI) in 1955. This body works as a co-coordinator between the industry, government policy makers, international tourism and hotel associations and others who have an interest in the field.

The Government of India started The Ashok Hotel in 1956, one of the largest and most luxurious hotels in New Delhi, popular amongst tourists as well as businessmen. The Indian Tourism Development Corporation (ITDC) was constituted in 1966, which opened more hotels as well as related services across the country.

The Leela group, Sarovar Group, Shalimar group, Pride group, The Lalit group, The Kamat group etc are all Indian hotel chains that came into existence in the last few decades.

International hotel companies like Hyatt, Best Western International, Marriott, Carlson, Four Points, Starwood etc. have made a successful foray into the Indian market.

1.5. CLASSIFICATION OF HOTELS IN INDIA

To classify operational hotels into different categories, the Ministry of Tourism (2014) has framed a voluntary scheme, so as to offer modern and uniform standards of facilities and services to the guests. Hotels in India are divided into two categories depending on the approval from the Ministry of Tourism:

1. DoT (Department of Tourism) classified hotels
2. DoT (Department of Tourism) unclassified hotels

1.5.1. CLASSIFIED HOTELS

Hotels are classified based on the number of facilities and services provided by them.

Such hotels that are classified under the Ministry of Tourism are entitled to various aids like tax incentives, interest subsidies, and import benefits. However, since the classification process is complex and time-consuming, a substantial number of the hotels in India are as yet unclassified. The Ministry of Tourism classifies hotels in the following manner:

- Star category hotels
- Heritage hotels
- Licensed units

1.5.2. STAR CATEGORY HOTELS

This system of classification of hotels is popular all over the world. This rating of hotels is carried out by the government or semi- government sources or independent rating agencies. In India, the classification of hotels is carried out by the Hotel and Restaurant Approval Classification Committee (HRACC)-a central government committee that checks and evaluates the hotels depending on the facilities and services offered.

This committee consists of the Chairman (HRACC) and other members selected from government and industry associations such as the Federation of Hotel and Restaurant Association of India (FHRAI), Hotel Association of India (HAI), Indian Association of Tour Operators (IATO), Travel Agents Association of India (TAAI) or Institute of Hotel Management and Catering Technology and Applied Nutrition (IHMCTAN). The committee visits the hotels to assess the facilities and services offered by the hotel and then depending on this, will award the grade. Some facilities are mandatory, while others are desirable for a hotel to be classified under the star category.

Within this category, hotels are classified as five-star deluxe, five-star, four-star, three-star, two-star and one-star.

i. One Star Hotels

Such properties are usually small, with basic facilities and plain food . Although main meals like lunch may not be served, or there may not be attached bathrooms for each room, standards of hygiene, comfort and cleanliness have to be maintained.

ii. Two Star Hotels

These hotels are small to medium sized with more facilities as compared to one star hotels. There are attached bathrooms with well-furnished bedrooms and food & beverages are available.

iii. Three Star Hotels

These hotels are bigger in size as compared to one and two star category ones. There usually is one restaurant with a prominent reception and larger public areas. Guest rooms will be well-furnished with attached shower & good quality supplies in the bathrooms. There will be direct dialing phone service, as well as room service available.

iv. Four Star Hotels

Here, guests expect a certain amount of luxury and style in the overall furnishing style and ambience of the hotel. Guestrooms are large and have co-ordinated furnishing and décor. The attached bathrooms are spacious and have both a bath as well as shower area. Staff to guest ratio is high, and there is a bell desk, twenty four hour room service, multi-cuisine restaurant, laundry & dry-cleaning service.

v. Five Star hotels

These hotels have spacious and luxurious accommodation, that are at par with international standards. Great attention is paid to interior designing, which should be elegant and offer the utmost comfort. Soft furnishings should be spotless and perfect. Service standards are formal, with highly skilled and technically sound staff members who are well-supervised and extremely attentive to guests every requirement.

1.5.3. HERITAGE HOTELS

These hotels operate from forts, palaces, castles, jungles, river lodges and heritage

buildings. They are representatives of an era gone by, of the riches and opulence of the past. The categories within heritage classification include heritage grand, heritage classic and heritage basic, as per the Ministry of Tourism.

i. Heritage Basic

These should have architecture that fulfills the requirements of a heritage hotel.

ii. Heritage Classic

These are palaces, forts, havelis, hunting lodges, and grand homes etc., constructed between 1920 & before 1935, that have been converted into hotels.

iii. Heritage Grand

These are palaces, forts, havelis, hunting lodges, and grand homes etc., constructed before 1920, that have been converted into hotels.

1.5.4. LICENSED UNITS

Hotels/establishments, which have acquired approval/license from the Ministry of Tourism to provide boarding and lodging facilities and are not classified as heritage or star hotels, fall in this category. These include government-approved service apartments, timesharing resorts, and bed and breakfast establishments.

1.5.5. UNCLASSIFIED HOTELS

These are the hotels that have not opted for the star classification. They also cannot be considered under heritage hotels.

1.5.6. BRANDED HOTELS

This segment mainly represents the branded budget hotels in the country, which bridge the gap between expensive luxury hotels and inexpensive lodges across the country. Budget hotels are reasonably priced and offer limited luxury and decent services. Increased demand and healthy occupancy have fuelled growth of budget hotels. These hotels use various cost control measures to maintain lower average

room rates without compromising on service quality. Ginger Hotels, ITC Fortune, Homotel, and Ibis are some of the popular budget hotels.

1.5.7. OTHER SMALLER MEMBERS

These are small hotels, motels and lodges that are spread across the country. This segment is highly unorganized and low prices are their unique selling point.

1.6. PROFILE OF THE INDIAN HOTEL INDUSTRY OVER A PERIOD OF 10 YEARS- FROM 2002 TO 2012

If there is one constant in the lodging industry, it is that everything changes. For example, changes in transportation technology brought about an increase in both hotel supply (number of rooms available to rent) and demand (people who want to rent rooms on use services). More people began traveling more frequently than ever before. With the rise in demand came an influx of new supply - hotels judiciously located and designed to service guests.

Vardharajan, Goel & Karulkar (2011) observed that the Indian hospitality industry recorded a healthy growth in the first half of the millennium, i.e. from the year 2000 to 2005. There were high occupancy rates during 2005 -2006 and 2006-2007. This resulted in higher Average Room Rates (ARR) for hotel rooms. The discrepancy between the number of hotel rooms available and the number required, led to an increase in average rates. This was commonly seen in the metros. Indian hotels were charging higher rates, at times much higher than that those charged by those in the other countries.

Due to the lucrative returns observed in the hotel industry in India, a number of hotel groups, domestic as well as international, made a foray into the market. Thus, India transformed into a much sought-after destination for such investments, that came in at a swift rate.

However, the meteoric rise in room rates made corporates search for alternate lodging possibilities. To fulfill this niche, there emerged corporate guesthouses and service apartments in the large cities and metros, which were definitely more affordable than hotel rooms. The increase in Average Room Rates in 2006-2007 led to a drop in the occupancy rates. Then due to the global economic slowdown in the ensuing years, the demand declined further. The Mumbai terrorist attacks that struck at the heart of the symbols of Indian hospitality-The Taj Mahal Palace & Towers & The Oberoi further led to the occupancy levels hitting rock-bottom during 2009-2010 and reduction in the number of international tourists coming to the country. In the year 2008, there were 5.28 million foreign tourist arrivals in the country, which went down to 5.17 million in 2009, as per the Ministry of Tourism- Government of India statistics.

There was a silver lining to this cloud, as it was during this period that the number of domestic tourists moving within the country surged. While average rates remained lower, occupancy rates rose, supported by surge in domestic tourist movements across India. The industry now has reported a positive development from 2010-2011 onwards, due to an increase in domestic travel, as well as international tourist arrivals. It is observed that robust increase in the per capita income in India has a positive impact on the domestic tourism market. There is a definite shift in the demography of the country. The rising young population along with its changing lifestyles and disposal income, has resulted in more and more expenditure on leisure services.

As per Ministry of Tourism- Government of India Statistics (2012) There were 57, 75, 692 foreign arrivals in the country in 2010, which increased to 63, 09, 222 in the year 2011. At the end of December 2012, there were 65, 77, 745 foreign arrivals in India. Consequently, the amount of foreign exchange earned by the country in Indian rupees was Rs. 64, 889 crores in the year 2010. This increased to Rs. 77,591 crores in 2011 and at the end of 2012, stood at Rs. 94, 487 crores at the end of 2012.

1.7. CURRENT STATUS OF THE INDUSTRY

The Indian hotel industry is a highly divided one, with a large number of small and unorganized players accounting for the major portion. Some of the main stakeholders in the organized segment include Indian Hotel Company (Taj group of hotels, The East India Company (Oberoi group of hotels), the ITC Welcomgroup Hotels, the Leela group of hotels (Hotel Leela Venture Ltd). Dun and Bradstreet (2010) opined that the fragmented nature of the Indian hospitality industry is reflected in the Herfindahl Index of Concentration, which was at 0.062 in FY07.

There is high seasonality in the Indian hospitality industry, with the demand peaking during the months of October to April. The monsoon period is generally the off-season. It was observed that Indian hoteliers made most of their money in the December and March quarters. However, one can see this trend changing in the past few years. To boost occupancy during the lean months and thereby generate revenue, hotels have introduced various offerings, such as targeting the MICE (Meetings,

Incentives, Conferences and Exhibitions/Expositions) segment and offering them attractive packages.

HVS Global Hospitality Services (2011) says that this industry is a labor-intensive industry. Thus, quality of manpower is of vital importance. The industry generates employment directly as well as indirectly, to skilled, semi-skilled as well as unskilled labor. The average employee-to-room ratio in India is 2.7 for luxury hotels, 2.11 for upscale, 1.52 for mid-market and 0.72 for budget hotels. The Indian average is 2.01, which is twice that of the world. It is observed that Hotel owners in India have higher manpower requirement. Today, well-known international hotel chains have forayed into the Indian market, across the various categories. In a bid to sustain themselves in the face of competition, Indian hotel companies have been forced to re-think on their manpower planning and use staff efficiently.

In the past few years, one sees that the hotel industry has developed rapidly in Tier II cities like Pune, Chandigarh, Jaipur, Kochi, Agra etc. apart from the Tier I cities like Mumbai, New Delhi, and Chennai & Kolkata. This is because of the rapid rise in estate prices, because of which commencing business operations and hotels in major metros entails a lot of costs. So, hotel companies prefer setting up their properties in these cities. Thus the hotel industry has progressed and expanded in these places in the country where international hotel companies like Radisson, Hyatt, Starwood group (Westin, Le Meridien and Four Points by Sheraton), Ibis etc. have launched their properties during the period of this study (i.e. from the year 2002 to 2012) .

The country is observed to be one of the fastest growing medical tourism destinations in the world. According to the Market Analysis Report by RNCOS Business Consultancy Services (2013) , the Indian medical tourism industry is anticipated to register a Compound Annual Growth Rate (CAGR) of more than 20 per cent during 2013-2015, therefore, creating vast possibilities for investments.

To illustrate this point further, one can give the example of a number of international hotel companies who are in the process of expanding their business in India, such as Hilton Worldwide which has opened its upscale brand of hotel, Hilton Garden Inn at Thiruvananthapuram. Hilton also plans to launch its operations in prime city centre locations across India.

Marriott International plans to open more than a dozen hotels in India by the end of 2016, adding to its existing count of 23 properties.

The French hotel chain operator Accor has expanded its Novotel hotel network across India, and has opened its eighth hotel under this brand in the country at Pune, Maharashtra. US-based hospitality and entertainment firm Hard Rock Hotels and Casinos plans to open its first five-star property in India.

In this industry micro markets have developed, particularly in primary cities. Due to the expansion of cities and augmentation of the business districts, to save time and energy spent in commuting, guests and travelers choose to check into hotels that are in the proximity of their area of work or visit. As a consequence, we see that a hotel company develops hotels in multiple locations in the same city to tap this market potential. A prime example of this in the area of this study, namely Pune region is the J.W.Marriott, (earlier known as) Pune Marriott & Convention Centre, located in Shivajinagar, Courtyard by Marriott Citi Centre near the Railway station, Courtyard by Marriott at Hinjewadi near the Information Technology Park, followed by Courtyard by Marriott, Chakan near the upcoming Pune airport. Another example is of the Hyatt Regency & the Grand Hyatt in Mumbai.

1.8. INITIATIVES BY THE GOVERNMENT OF INDIA TO PROMOTE THIS INDUSTRY

As per the consolidated FDI Policy, released by DIPP, Ministry of Commerce and Industry, Government of India, 100 per cent Foreign Direct Investment has now been permitted in the hotel and tourism sector. Moreover, the Government is designing a single tax structure to be followed across the entire country and thus rationalize the taxation charged on hospitality industry.

As per data released by Department of Industrial Policy and Promotion, Government of India(2013), the foreign direct investment (FDI) inflows in hotel and tourism sector during April 2000 to September 2013 stood at US\$ 6796 million.

To endorse its hospitality and tourism industry across the globe and attract travellers from all corners of the world, the Indian Government has launched various campaigns

like 'Atithi Devo Bhava', 'Colors of India', and 'Incredible India' to name a few. A Hospitality Development and Promotion Board has also been established to monitor and expedite hotel project approvals.

The Ministry of Tourism has been making efforts to develop quality tourism infrastructure at tourist destinations and circuits in the country. As per the 11th plan, Ministry of Tourism Statistics (2013), it has sanctioned Rs 4,090.31 crore (US\$ 652.42 million) for tourism projects, which includes projects related to Product/ Infrastructure Development for Destination and Circuits (PIDDC), Human Resource Development (HRD), Fairs and Festivals and Adventure & Rural Tourism for infrastructure augmentation.

In the year 2002, there were 2.38 million foreign tourist arrivals in India which went up to 6.58 million in the year 2012, over a span of 10 years, as per the Ministry of Tourism, Government of India (2012) Statistics.

To promote the medical tourism and health sector, the Government of India has allowed free medical visas for Maldivian nationals for 90 days. The Ministry of Tourism, Government of India and the Japan Tourism Agency, Ministry of Land, Infrastructure, Transport and Tourism, Government of Japan have signed a memorandum of understanding (MoU) for strengthening cooperation in the field of tourism. This would simplify travel and tourist visits and further fortify the tourism partnership between the two countries.

In order to attract foreign visitors, India has a system of Visa on Arrival for citizens of foreign countries like Finland, Japan, Luxembourg, New Zealand & Singapore from January 2010, and extended it to six more countries-Cambodia, Indonesia, Vietnam, The Philippines, Laos and Myanmar in January 2011.

In the near future, the Government of India will try to create and market new and upcoming tourist destinations in order to satisfy the increasing requirement for tourism and hospitality in India.

1.9. PROFILE OF THE INDUSTRY IN MAHARASHTRA

The Confederation of Indian Industry (2010) says that Maharashtra has always led the country's industrial development scenario and continues to attract the largest quantum of investments, both domestic and foreign. The State has established strengths in every sector including engineering, automobiles and auto components, chemicals, drugs and pharmaceuticals, textiles, information technology, biotechnology and many others. Around 30 per cent of India's exports - gems/ jewelry, textiles/ garments, leather goods, engineering goods, plastics, pharmaceuticals, electronics/ information technology, horticulture - are from Maharashtra.

The State boasts of one of the best financial infrastructures in the country and is commonly referred to as an economic powerhouse. Important financial institutions like the Bombay Stock Exchange, the National Stock Exchange and Reserve bank of India are located in the State. In fact, Maharashtra is justly proud of its investor-friendly environment. It has consistently been ranked the best among major Indian States in World Bank's Investment Climate Assessment surveys, especially in terms of having better infrastructure, less corruption and a relatively deregulated business environment. Maharashtra is indeed a growing economy with a growth rate of 7.1% for the last decade.

The State of Maharashtra is home to one of the fastest- growing contributors to India's economy, the hotel industry. Today, in addition to the previously existing chains like the Taj group, the ITC Welcomgroup, the Leela group & the East India Company (Oberoi group), we see that there are international hotel chains that have established themselves as leaders in the market, such as Hilton, Hyatt, Marriott, Starwood and Accor, to name a few.

The cities of Mumbai, Pune, Aurangabad, Nagpur, Nashik, Kolhapur as well as the Konkan coast are witness to this phenomenon. Maharashtra is blessed with a 720 km long coastline, which offers tourists access to the famous chowpatties as well as little known beaches that are a sight to behold, like Anjarle and Velas in Dapoli & Tarkarli in Malvan, apart from the famous ones at Alibaug and Mumbai. There are beautiful hill-stations like Lonavala, Khandala, Panchgani, Mahabaleshwar, Matheran, Amboli

and Bhandardhara. The Kaas Plateau near Satara is a UNESCO declared World heritage site, which is home to exotic flora, visited by thousands of tourists during the flowering season every year.

So there is something on offer for every traveller. These travellers need accommodation and food, thus the hotel industry has thrived. There are numerous types of accommodation facilities ranging from guest houses and lodges, to star category hotels and resorts to suit every pocket. There are different category hotels like luxury hotels, apartment hotels, business hotels and airport hotels, to name a few.

This industry is responsible for not only getting valuable foreign exchange, but it also positively impacts the economy in other ways by generating employment, directly as well as indirectly, through the Multiplier effect of tourism.

1.10. PROFILE OF THE INDUSTRY IN PUNE REGION

Pune city is the cultural capital of the State of Maharashtra. It has a rich and vibrant history and culture, due to its relationship with the Maratha empire, being the seat of the Peshwas. It is also the Mecca of education and acknowledged as the Oxford of the East far & wide, due to there being numerous institutes of repute offering higher studies. Students from within the country as well as other countries come here every year to seek admission for a range of professional courses, traditional as well as upcoming ones.

The ancient Khandoba temple at Jejuri near Saswad, and the Ekvira temple on the hills of Malavli near Lonavala & Khandala see scores of pilgrims visiting every day, to seek the blessings of these benevolent deities. The Chaturshringi temple as well as the ancient Pataleshwar temple are famous amongst locals as well as visitors. Other historical monuments in Pune city include the Aga Khan Palace and the Shaniwar Wada. Museums like Raja Kelkar Museum, Mahatma Phule Museum and the Tribal Museum display the emblems of the city's glorious past. Earlier renowned for its automobile and forging industries, today Pune is famous for Information Technology companies, BPO's and KPO's.

Since Pune has no Central Business District as is present in most large cities, the industrial areas are located in proximity to the city and are concentrated in places like Pimpri, Chinchwad, Bhosari, Talegaon, Pirangut, Hinjewadi, Chakan, Ranjangaon, Kharadi and Magarpatta. With the growth of the industrial sector, especially manufacturing, automobile & information technology, it is seen that there are a lot of corporates & business travellers stopping over for a few days.

Moreover, its proximity to Mumbai makes it an easily accessible destination, connected to most parts of the country by air, railways or roadways. The opening of the Mumbai-Pune Expressway in the year 1999 has greatly reduced the travelling time between these two cities, and contributed greatly to the proliferation of industry here.

The profile of guests who visit Pune hotels ranges from business travellers to people who have come to participate in MICE (Meetings, Incentives, Conferences, Exhibitions/Expositions) Tourism, for which Pune has emerged as a popular destination. This is due to better connectivity with Mumbai as well as better air

connectivity to most of the destinations within the country as well as a few international destinations.

Earlier, there were few good star-category hotels in the city. The Blue Diamond, Holiday Inn, Le Meridien, The Pride Hotel and Aurora Towers were some of the established hotels, that catered to the demand of the guests till the late 1990's. It was in the year 1999 that the Taj group made its entrance in the city, taking over The Blue Diamond Hotel and renaming it as the Taj Blue Diamond.

The current scenario is a far cry from those days. International hotel brands vie for attention of prospective guests in Pune region. HVS Global Hospitality Survey (2012) stated that there were 5672 hotel rooms available in Pune city in the year 2011-2012, as against 777 hotel rooms in the year 2006-2007.

At this moment, there are properties like the J.W.Marriott, Courtyard by Marriott, Hyatt Pune & Hyatt Regency, The Westin, Oakwood Premier, Oakwood Residences, VITS & Orchid, Holiday Inn, Sayaji, Radisson, Sun n Sand, Ibis, Novotel, Ramee Grand etc., running operations in and around Pune, Pimpri, Chinchwad, Chakan & Kharadi areas. There are resorts like the Fariyas resort, The Duke's Retreat, Lagoon in the hill-stations of Lonavala & Khandala. The Mercure Lavasa is doing good business at Lavasa. The State's only fort hotel-Fort Jadhavgad, a five star heritage property is located in Saswad town, in Pune district. These are but a few of the representatives of the hotels in Pune city operational till 2012.

Thus, the Researcher has elected to base this study on the period between 2002 to 2012 when growth & development of hotels in Pune region was actively recorded.

1.11. BACKGROUND OF THE STUDY

Nowadays, we hear a lot about saving the environment, conservation of natural resources, implementation of eco-friendly practices in our day to day life etc. Right from school, children are taught the importance of saving natural resources, planting trees, segregating garbage and recycling.

Going green has become the new mantra for every consumer to show his or her awareness about the environment. The different industries too are doing their level best to showcase themselves as eco-friendly, so as to build a loyal base amongst these newly aware consumers. The hotel industry is no different. Most hotels say they promote green practices in their daily operations, so as to target these customers. They also do it to save costs in the long run and opt for certifications from independent auditing agencies to get approved. But why is it so?

1.11.1 CONCEPT OF GREEN/ECO-FRIENDLY/ENVIRONMENT-FRIENDLY HOTELS

A few years ago, the perception of eco-friendly awareness in the hospitality industry around the globe involved putting up tent cards in the bathrooms that requested hotel guests to reuse their bath towels and bed sheets, instead of asking for a change of bath and bed linen, after using it once. Another way, in vogue, was to use recycled paper stationery & newspaper bags. In India too, the case was hardly different, with most of the hotels limiting themselves to these simple and basic ways of showing their environmental awareness. There was no concrete action plan in most hotels, with specific guide-lines for following green initiatives in hospitality operations.

However, today we find that there is a trend internationally towards greening of hotels i.e. following eco-friendly practices, in all aspects of operations and in as many departments as possible. It includes using solar energy, harnessing wind energy, rainwater harvesting, waste management, organic farming, using local produce, constructing green buildings etc. This trend is mainly due to the fact that the hotel industry has realized that greening of hotel and resort properties is not only one of the main factors in saving costs, but also satisfies the requirements dictated by today's discerning, environment-conscious traveller. Such a traveller or a hotel guest wants to contribute in saving the earth's natural resources and support the environment by

using eco-friendly measures. These guests prefer to stay in hotels that use these measures while providing accommodation, food & other facilities that are as per their decided standards.

Walker. J.R. & Walker J.T.(2010) have said that Eco efficiency, termed “green” is based on the concept of creating more goods and services while using fewer resources and creating less waste and pollution. They further stated that sustainable lodging, also known as “green hotels” has become a powerful movement. Corporations as well as independent properties are becoming greener in their operating practices.

Sloan, Legrand & Chen (2013) stated that sustainable hospitality operations or ‘green hotels’ aim to reduce their impact on the environment and society.

The movement towards sustainability has expanded across the globe, in all fields. We see that Government & Non-Government organizations, corporations, as well as consumers are increasingly focusing on the need to exist in harmony with their surroundings, and reduce their environmental footprints. The Hospitality Industry is no exception, and finally, the concept of sustainability has begun to gain momentum in this sector.

Brundtland Commission’s “Our Common Future” (1987) sponsored by the United Nations brought out notion of sustainability. According to the WTTC (1996), three International organizations-The World Travel & Tourism Council, The World Tourism organization & the Earth Council developed the Global Environmental Certification Programme for the Travel & Tourism Industry in the year 1996. An action plan –‘Agenda 21 for the Travel & Tourism Industry: Towards Environmentally Sustainable Development’ was lodged jointly by these organizations. This eventually led to the launch of the ‘Green Globe’ an international benchmarking certification & performance-improvement programme based on the Agenda 21 principles.

Sloan, Legrand & Chen (2013) opined that the hospitality industry set about incorporating the philosophy of sustainability in the early 1990’s. With the publishing, of Agenda 21 for the Travel and Tourism Industry for the first time individual businesses and the hospitality industry were encouraged to adopt codes of conduct promoting sustainable travel and tourism best practices.

This programme seeks to identify the various environmental & developmental issues that threaten the economy & ecological balance. It also advocates a strategy for gradual transition to more sustainable development practices. Hotels can get 'Green Globe' certified by addressing important environmental issues in critical areas such as greenhouse emissions, energy efficiency, management of freshwater resources, ecosystem conservation & waste water and solid waste management. In addition to Green Globe & Agenda 21, the Hospitality Industry has numerous regional certification programmes developed by the governments of those countries, as well as the private hotel companies.

With this background in mind, if one observes the developments across the past 10 years, it is seen that travelers have become greatly aware about the environment that they live in. Modern day travelers have become conscious about their carbon footprint; and to fulfill a part of their responsibility towards the environment & the ecology, they are increasingly being drawn to stay in hotels, which too, are environment conscious. Hence today, we find that a lot of hotels are incorporating green practices in their day to day operations, to cater to the need of these travelers, as well as to do their bit, for the environment.

Over the past few years, hotels have followed the trend of using more and more local produce in their food & beverage operations as a part of this initiative. They grow herbs and vegetables in their own garden, and serve them to their guests. Also, the use of industrial chemical cleaning agents has reduced, with the hotels going in for green cleaning products, that do not leave residual chemicals in the area, long after the housekeeping has finished with the cleaning. This is a welcome change for the housekeeping staff, as prolonged exposure to such chemicals almost always leads to respiratory illnesses.

Over the last decade, the movement towards ecologically sound tourism has swept across the world, and the various practices being implemented are as diverse as the countries in which they are implemented. Hotels companies are being prompted by rising energy costs, governmental pressure, consumer expectations & the competitive landscape to increasingly make sustainability a top priority. They are thus increasingly promoting environmentally-friendly practices; as well accepting sustainability through both developmental and operational strategies. This includes

taking steps to implement these green practices in all aspects of their day to day operations, or at any rate, those areas where these practices can be incorporated. This focus on environment-related issues is not just a passing phase, and is anticipated to continue for a long period of time.

1.11.2. GREEN HOTEL CERTIFICATIONS FROM AROUND THE WORLD

With the hotel and tourism industry becoming more and more conscious of environment-friendly practices, and their clientele too preferring green practices, it is seen that there have emerged several green certification programmes for the hospitality industry. There are several such programmes that hotels can go in for, each with its benefits and limitations. Hotels can go in for multiple classifications. Some of the more well-known certifications are mentioned below.

1. Green Key Global

This certification came into being in the 1990's and as part of its Green key Eco-rating Programme, consists of an online audit of 140 questions. Hotels answer these on the basis of their responses and are awarded one to five Green Key eco-ratings. They are then shown way to reduce their operating costs and impacts on the environment, thereby earning more keys. The Green Key audit focuses on energy conservation, water conservation, solid waste management, hazardous waste management, indoor air quality, community outreach, building infrastructure & land use. One of the prominent hotel chains that has been certified by this is the Fairmont group of hotels in the United States of America.

2. Green Globe International

Green hotels, resorts, conference centres, transportation, travel industry, including MICE centres, Spa and golf courses generally apply for this certification and it has been recognized by the tourism industry since 1993. Hotels in Europe, Latin America, China, Middle-East, Caribbean and America have applied for this recognition in the past. To get this international certification, a hotel is scrutinized by an independent third party auditor on-site to check the facilities and products. The hotels have to reapply for recognition annually, while fulfilling an increasing number of requirements made mandatory for certification every year in order to ensure that highest standards are maintained. Movenpick Hotel and Spa, at Bangalore, Karnataka is certified under this programme.

3. Energy Star

The United States Environmental Protection Agency started the Energy Star

programme to reduce consumption of energy and emission of greenhouse gases. There are various categories of commercial buildings that apply for this rating, hotels are just one category.

4. Green Seal

Hotels have been certified under the Green Seal since 1995. This certification is not only for hotels, but is applicable to about forty different kinds of products. It started in 1989. To get certified under this, hotels have to apply for a primary assessment, an audit on-site and monitoring once a year to ensure adherence with standards. Waste management, recycling, conservation of freshwater resources, achieving energy efficiency and green purchasing are a few of the areas where the hotels need to fulfill the requirements. Since Green Seal certification is for different types of products, the hotel guests too would find it more authentic, as they may already be familiar with this kind of certification.

5. Audubon Green Leaf

It was in 1998 that the Audubon Green Leaf Programme started in order to help the hotel industry to provide good quality services to the guests while at the same time reducing its negative effect on the environment. Hotels first do a self-audit of their facilities & processes, followed by a Green Leaf assessment & survey. As a result, the hotels are given ratings ranging from one to five Green Leaves depending on how suitably they fulfill the criteria for energy-saving, waste reduction, resources and water conservation and prevention of pollution. The Green Leaf has a tie-up with Audubon International, which is a third-party internationally well-known environmental group.

6. Leadership in Energy & Environmental Design (LEED)

The LEED certification is a standard that is meant for the construction of green buildings in the United States. It differs from the other green certification in that it is not concerned with assessing how green the hotel's operations are, before certifying. The programme classifies buildings as per their category i.e. Hotel, school, an existing structure, a new construction etc. and then meticulously judges them on a 110 point scale. Depending upon how many points the building earns, it earns its certification-certified, silver, gold or platinum. It is a third-party certification that assures that the

building was planned or constructed in such a way as to ensure energy efficiency, conservation of water and other resources, waste management, pollution control etc. It is one of the most trusted green certification programmes around the world. The ITC Grand Chola at Chennai, Tamil Nadu India is the world's largest Platinum LEED certified hotel in the world.

7. Eco Rooms & Eco Suites

EcoRooms & EcoSuites programme emphasizes on the need for more sustainability and eco-friendly practices in the hospitality industry. They have a stringent group of EcoCriteria to promote green practices in hospitality. It offers two levels of green certifications. The first one is 'approved' for those who have successfully applied after fulfilling the criteria. The second one is 'certified' which is given after the property is audited by a member of this programme's advisory board. There are eight main criteria, that the properties need to completely comply with, in order to get certified. Thus this is a highly difficult programme to get certified under. Some of the benchmarks include use of Green Seal products, Reuse programme for bed and bath linen, energy-efficient lighting, dispensers for bathroom amenities, efficient plumbing, smoke-free hotel etc.

8. Sustainable Tourism Eco-Certification Programme (STEP)

This programme was started in 2007 by Sustainable travel International which is a non-profit organization. It follows the principles laid down in the Global Sustainable Tourism Criteria that are norms for the tourism industry stake-holders to implement environment-friendly practices. Hotels in United States, United Kingdom, Asia and Australia are getting themselves certified under it.

9. Ecotels

This is an environment certification for the hospitality industry which aims to have a completely green/environment-friendly hotel. It seeks to do this not only through the construction, but also every aspect of operations. It is managed by the HVS Services which operates from India and the United States. The Orchid, Mumbai is India's first Ecotel.

1.12. GREEN HOTELS

1.12.1. GREEN HOTELS IN ASIA

It was in the year 1994 that 16 well-known hotel chains like Shangri-la hotels and resorts, the Mandarin Oriental as well as the Okura hotels and resorts world-wide started the Asia-Pacific Hotels Environmental Initiative (HEI), which catalyzed Asian hotels to embrace green practices. The HEI is an offshoot of the United Nations Department of Economics and Social Affairs' division of Sustainable Development that came into existence in 1993. The Prince of Wales' International Business Leaders Forum introduced this. The Association of South East Asian Nations (ASEAN) has established the ASEAN Green Hotel Standards which recognizes the hotels that match their standards by honoring them with ASEAN Green Hotel Awards.

Hotel companies like Thailand's Sixth Senses Resort and Spa and Singapore's Banyan Tree Hotels and Resorts have intelligently included green ventures in their approach towards business. A few of the Banyan Tree's endeavors include conservation of marine life in Seychelles and Bangkok. The Sixth Senses Hua Hin Spa in Thailand used material from renewable sources (for example straw, rice husks & clay-like mud) to make green buildings.

In Bali, Indonesia, a hotel named Damai Lovina Villas obtains more than three-fourths of its ingredients through its organic farms as well as local gardens.

In Japan, budget as well as luxury hotels are following green practices in daily operations. It is seen that these hotels are even following standards set in the west for building green buildings.

1.12.2. GREEN HOTELS IN INDIA

In India, almost one-third of the energy & water usage is consumed by commercial buildings, including hotels. Thus there is a significant opportunity to assess the implementation of environmentally-sustainable practices in the hospitality industry in the country. Such practices in Indian hotels span from constructional design, to operational planning. To be a little more precise, they would entail everything from

educating guests & employees, marketing initiatives, recycling programmes, use of alternative technology & energy-saving programmes etc. Moreover, these eco-friendly initiatives help in increasing efficiency as well as saving costs.

With rapid globalization and increased exposure to world travel, one observes that this trend has percolated into the Indian hotel industry as well as into the psyche of the Indian traveller/hotel guest. It was an independently-owned business hotel, The Orchid that laid the foundation of this green revolution in the Indian hotel industry in the year 1997, by being certified as the first five star 'Ecotel' in Asia. This certification was done by the Hospitality Valuation Services, HVS International, New York, a global consulting and services organization which is also an ISO certified body.

An 'Ecotel' certification signifies that the hotel so certified, is totally environment-friendly in all operational aspects. It implements particular methods to conserve water, energy & reduce solid waste. In order to be recognized as an Ecotel, it is imperative that the hotel fulfills the criteria laid down with respect to energy efficiency, conservation of water, management of solid waste, educating employees & building community awareness as well as commitment to the environment. These are the 'five globes' of an Ecotel that a hotel must follow, in order to maintain its classification as an Ecotel. The HVS sends environment experts to inspect the property annually, to ascertain that it follows the norms specified by it, so as to ensure its continuation as an Ecotel.

The initial costs of setting up an Ecotel or an environment-friendly hotel are high. However in the long run it is more profitable, as the running costs are lowered. These hotels are usually constructed using environment-friendly materials like PPC cement (Portland Pozzalana cement), which last long, save energy (almost 40 per cent more) and insulate against extremities of weather. The windows are sealed thermally and double-glazed, thereby preventing heat and noise from entering the room. These measures lower air-conditioning or room heating costs and save electricity.

All lighting requirements of the property are fulfilled using low energy lamps (compact fluorescent lamps). When guests insert the room's key cards, then only the room lights and air-conditioning are switched on. Sometimes, the rooms may have

interactive television sets, which are used to send or receive messages and clear bills, thus saving paper or phone costs. Water is preserved and recycled. All taps in the guest rooms, toilets, cafeteria and the kitchen contain special devices that increase force and decrease water outflow, saving nearly 50 per cent water. Recycled water is used for gardening & air-conditioning. Rain water may be collected in rain-harvesting wells, which helps to restore the water table.

India's largest as well as oldest hotel chain, the Taj group of hotels, is working under the Taj Earth initiative (Environment Awareness and Renewal at the Taj group), with EC3 Global, an international environmental advisory group to reduce its carbon emissions.

While the concept of global greening is more than a decade old, in the country, it has picked up speed in the past few years, or specifically the past ten years, through government initiatives and increasing awareness. Realizing the long-term commercial benefits, Indian hotels have also welcomed the trend. Sustainable practices are not only here to stay but are also anticipated to further become a focus of the hospitality industry in the future.

The Taj Hotels, Resorts & Palaces (The Indian Hotel Company), India's oldest hotel chain has shown its commitment towards the environment by implementing the Taj EARTH (Environment Awareness and Renewal at Taj Hotels) programme in all the properties belonging to this chain. It was recognized for its energy-conservation & environmental management efforts by EarthCheck, which is a global certification programme in the hospitality industry. This movement seeks to greatly reduce, in fact to minimize the negative impact of its business operations on the environment. There are energy audits done every three years & each employee of the group must undergo environment training. The group also emphasizes on a phase by phase reduction of its freshwater consumption.

Across its properties where there is sufficient land, waste from the kitchens & dry leaves are utilized efficiently to make compost, that will be used in the hotel's garden. A few properties have grown their own herbs like basil and celery in their kitchen garden, which are used in the kitchens. A few ways common to all the Taj properties

include converting paper that was used for printing and left blank on the other side into writing pads. Used bed sheets are converted into cleaning cloths & dust sheets.

Each property does its bit for the environment, for e.g. The Taj Lake Palace at Udaipur, Rajasthan located in the middle of the well-known Pichola Lake, takes special precautions to prevent spoiling of the water and causing harm to the aquatic life. Here, battery-operated boats are used to transport guests from the mainland to the hotel, instead of gasoline powered ones. The wastewater that is generated daily is recycled and used for irrigation.

The Taj Coromandel at Chennai obtains its electricity from a grid that is fed by windmills; while The Rambagh Palace at Jaipur has set up a biogas plant to reduce its energy costs. The Taj Mahal Hotel at New Delhi, has installed solar panels on its rooftop in order to increase its energy supply.

Another example is that of The Taj Garden Retreat at Kumarakom. This property is located in the proximity of the Vembanad Lake and the Kumarakom Bird Sanctuary. Several species of migratory birds have made it their favorite haunt. Here, special lighting is used to reduce the glare in order to prevent disturbances to the animal life, and wastewater is treated before being discharged.

The Courtyard by Marriott hotels in India have a company-wide ECHO programme (Environmentally Conscious Hospitality Operations) in place to provide guidance in five key areas: Water and energy conservation, clean air initiatives, waste management, clean-up campaigns and wildlife preservation.

The ITC group of hotels has its own environment-awareness programme, the WelcomEnviron. Each hotel property has its own programme, involving local participation, participation of the employees and internal conservation of energy using such tools and environment-friendly materials. This group in fact has become a global green leader in the hospitality industry.

The ITC luxury hotels group was awarded the LEED (Leadership in Energy and Environmental Design) Platinum rating a few years ago and now has become the greenest luxury hotel chain in the world. This is the most well-known standard for

green building in the world. Certified projects can achieve a higher rating of Silver, Gold, or Platinum if they receive enough additional credits. The group acquired this status due to its commitment to green buildings, which are energy efficient, utilize renewable energy, conserve and recycle water, and manage waste. In fact, the main office of this hotel group, located at Gurgaon, is in the ITC Green Centre, which is the first among large buildings in the world to get a LEED Platinum rating.

ITC Sonar Bangla, Kolkata is the first hotel in the world to obtain carbon credits. These are Certified Emission Reductions (CERs) or climate credits, issued by the clean Development Mechanism (CDM) Executive Board, for emission reductions achieved by CDM projects and verified under the rules of the Kyoto Protocol. The ITC Maurya in New Delhi has a solar concentration on its roof-top in order to fulfill its thermal requirements. ITC Grand Central, Mumbai has pioneered the concept of Green Banqueting in hotels to further reduce carbon footprints. This involves avoiding the use of disposable cutlery/cups, encouraging carpooling for the participants of conferences etc.

The Leela Palaces, Hotels and Resorts have also made an effort to reduce the impact of their products or services on the environment by using eco-friendly practices for better energy efficiency, and use of raw material obtained from sustainable or renewable sources as far as possible. The Leela Palace at Bangalore, uses solar panels installed on the roof of its porch to warm up the water in its swimming pool; while The Leela Palace at New Delhi, has the latest sewage treatment plant for treatment of wastewater, through a multi-stage process before reusing or recycling it.

Apart from the large hotel chains in the country, it is seen that even small chains, as well as stand-alone hotels have become aware of the environment issues and have started incorporating green practices in their daily operations. The Green Hotel in Mysore is a good example of a sustainable hotel in India. It was set up by a UK based charitable organization. It is located in an old restored palace; the Chittaranjan Palace originally built for the princesses of Mysore. There is a beautiful garden that is used as a restaurant. The hotel strives to be an equal opportunities employer, to incorporate environmentally friendly and energy saving practices, and to use Indian crafts in its furnishing. All profit earned goes to charitable and environmental projects in India.

The Rain Tree in Chennai is South India's first certified Ecotel. A few ways of showing its concern for the environment include use of medium-density wood for indoor purposes, making it more manageable. All rooms in the hotel are equipped with a 'green button', which if pushed, reduces the strain on resources by stabilizing room temperatures. There are energy-saving lights fitted in the hotel. Moreover, only steel & glass is used in the furniture, as it is low maintenance & durable. Instead of having a platter of cut-fruits left in the guest rooms for the guests, the hotel provides a card in each room to request for fruits, if the guest so desires. The waiters here are instructed to not fill water glasses up to the brim, but pour out the required quantity of drinking water.

The Heritage, at Madurai in Tamil Nadu collects its leftover food and sends it to a local piggery farm on a daily basis. Efforts like these are on the rise in a number of hotels across India. Several hotels work with NGOs, corporate groups and educational institutions to conduct environmental community awareness programs.

Thus it is seen that there is increasing awareness in Indian hotels about environment-friendly practices. The hotel industry has started realizing that 'going green' would translate into higher initial costs but an overall saving in operational costs; at the same time making guests happy. However, still a lot more has to be done in the industry to promote environment-friendly practices to offset rising energy costs & the impact of global warming.

1.12.3. GREEN HOTELS IN MAHARASHTRA

It was in the year 1997, that Dr. Vithal Kamat constructed The Orchid, at Mumbai, Maharashtra. It was Asia's first five star Ecotel. The ITC luxury hotel group too started incorporating eco-friendly practices in its hotels in the 1990's. Its ITC Maratha at Mumbai has been honored with the FHRAI environment Champion award.

Slowly, other hotels followed. Today, we see that every large hotel group is following some kind of green practices or the other. The Rodas at Mumbai is another Ecotel that is committed to this cause. All big hotel groups having their properties in Maharashtra, such as the Taj group, Oberoi group, J.W. Marriott, Starwood (which owns Le Meridien & The Westin hotels among others), Hyatt group (now taken over

by Starwood in the year 2015), Accor group etc. today implement green practices to some extent in their daily operations.

1.12.4. GREEN HOTELS IN PUNE REGION

Apart from the hotels mentioned above, a special mention must be made about the Kamat group's Hotel VITS and Orchid in Pune, which is following all the green practices that are in existence at The Orchid, Mumbai. However, it is not an Ecotel. The majestic five star Fort Jadhavgadh (also belonging to the Kamat group) at Saswad town, Maharashtra's first fort heritage property, keenly implements environment-friendly practices in daily operations. An example is that of growing vegetables for the hotel kitchen and staff meals in the vast fields in the vicinity of the fort. It has gone one step ahead, in not allowing any mobile phone towers to be put up in its vicinity as the birds and local fauna get disturbed and affected by the mobile phone signals. Though, this does inconvenience the guests somewhat as they do not get full range for their mobile phones.

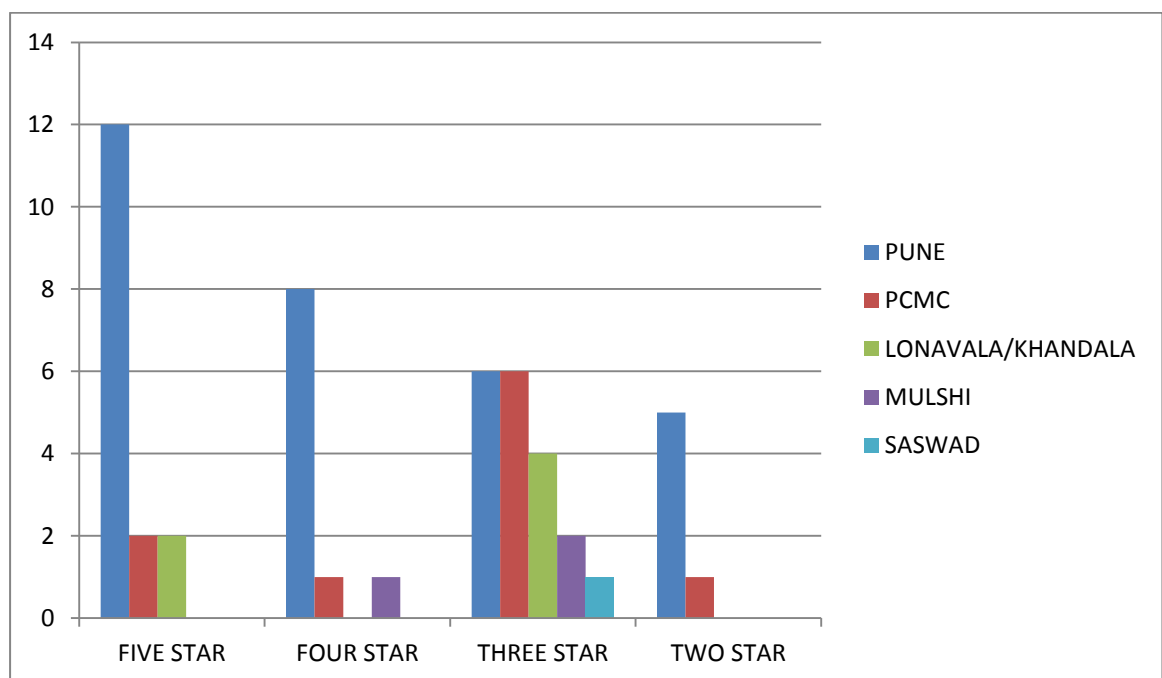
1.13. PUNE REGION AS DEFINED IN THE COURSE OF RESEARCH WORK FROM TOURISM POINT OF VIEW-PUNE, PIMPRI, CHINCHWAD, LONAVALA, KHANDALA, MULSHI AND SASWAD.

For the purpose of this research work, the Researcher has defined Pune region from the tourism point of view . Based on this concept, the area of study will be concentrated on Pune city, the townships of Pimpri & Chinchwad, Lonavala, Khandala, Mulshi and Saswad.

LIST OF 2 TO 5 STAR HOTELS AND RESORTS SURVEYED IN PUNE REGION-WEST, SOUTH, EAST AND NORTH OF PUNE, PIMPRI, CHINCHWAD, LONAVALA, KHANDALA, MULSHI,SASWAD.

Most of these hotels are self-declared star category hotels, i.e. they have the necessary facilities which are mandatory for that particular category, however, they have not formally approached the government agencies for star-category ratings. In all, 51 hotels responded to the questionnaire.

Graph 1-1 Total number of 2 to 5 star hotels and resorts surveyed



PUNE

1. Five Star Hotels

- i. J.W.Marriott
- ii. The Pride Hotel
- iii. Sun N Sand
- iv. The E Square Hotel
- v. Hyatt Regency
- vi. Vivanta by Taj Blue Diamond
- vii. Le Meridien
- viii. Radisson Blue
- ix. The Oakwood Premier
- x. O-Hotel
- xi. The Westin Pune Koregaon Park
- xii. Hyatt, Pune

2.Four Star Hotels

- i. The Central Park Hotel
- ii. Ramee Grand
- iii. Deccan Rendezvous
- iv. Seasons-An Apartment Hotel
- v. Royal Orchid Golden Suites
- vi. Hotel Aurora Towers
- vii. The President Hotel
- viii. Sagar Plaza

3.Three Star Hotels

- i. Centurion,Pune
- ii. Royal Orchid Central
- iii. Shree Panchratna
- iv. Orbett Hotel
- v. Brookside
- vi. Ashish Plaza

4. Two Star Hotels

- i. Hotel Madhav
- ii. The Ambassador
- iii. The Ambience Hotel
- iv. Hotel Ritz
- v. Hotel Suyash

PIMPRI & CHINCHWAD

1. Five Star Hotels

- i. Hotel VITS and Orchid
- ii. Holiday Inn

2. Four Star Hotels

- i. Sayaji

3. Three Star Hotels

- i. Lemon Tree
- ii. Fortune Inn Exotica
- iii. Doubletree By Hilton
- iv. Keys Hotel
- v. Citrus Hotel
- vi. Hotel Kalasagar

4. Two Star Hotel

- i. Celebrations Inn

LONAVALA AND KHANDALA

1. Five Star Hotels

- i. Fariyas
- ii. The Duke's Retreat

2. Three Star Hotels

- i. Lagoon Resort
- ii. Citrus
- iii. Orchard Resort
- iv. Zara's Resort

MULSHI

1. Four Star Hotels

- i. ITC Fortune Select

2. Three Star Hotels

- i. Spree Longer
- ii. Malhar Machi

SASWAD

1. Five Star Hotels

- i. Fort Jadhavgadh- a Heritage hotel

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

2.2. Review of existing literature

2.3. Outcome of Literature review

2.1. INTRODUCTION

The literature review is supposed to be one of the mainstays of any research. In a research project, it is essential to understand what has already been done in the precise topic selected and what has been done in the wider subject area of that topic. It is not possible to know the important problems in researching the topic unless literature review is done. (Adam, Khan & Raeside, 2007, 2014).

Sachdeva (2008, 2009, and 2011) said that reviewing of literature is an important early step in a research project. A literature review seeks to identify related research and to give a milieu to the present research project with reference to a particular theory & context. Thus, review literature of research done so far on the chosen subject aids to plan a structure for the research which is to be undertaken.

For the hospitality industry today, it is important to incorporate 'green' or environment-friendly practices in their day to day operations for a variety of reasons. A large number of hotels have started doing it on a day to day basis, in all the core areas. However, till date there is no specific research conducted on the management of these practices specifically in two to five star hotels and resorts in Pune region. Hence a study on this is the need of the hour.

This study aims to analyze the various practices that are being followed by these hotels, any special requirements for these practices such as certifications, as well as the impacts of conducting these initiatives on the business of the hotels.

The Literature review was done by reading research articles from international journals, magazines, online newspapers and books. Digital resource sources like the online journals with a good impact factor, available in the British Library were

accessed for retrieval of data from the website <http://www.library.britishcouncil.org.in>.

2.2. REVIEW OF EXISTING LITERATURE

According to the World Travel and Tourism Council (2000), 11% of the GDP of the world is due to the tourism industry, which is one of the biggest industries in the world. It has given rise to 200 million jobs across the world.

The United Nations Environment Programme (2002), opined that the hospitality industry, a key constituent of the travel & tourism industry

The World Tourism Organization (2002) asserted that as a major component of travel and tourism, the hospitality industry has its own reasons to conserve the environment; because it is one of the industry's main resources. Most hotels indulge in numerous environmental practices that cannot be checked by any one particular agency. So, this industry should have self-regulatory mechanisms like in-house environmental audits, implementation of an environmental management system as well as going in for some kind of eco-certification. Sustainable tourism is a guide to utilization of resources to fulfill economic, social and aesthetic needs. It encourages management of all resources in such a way that economic, social and aesthetic needs can be fulfilled. At the same time, it promotes the preservation of culture, ecology, bio-diversity and life support systems.

Alexander (2002) reviewed that food waste contributes to forty six percent of the total waste generated by a hotel. As food waste can be composted, it is seen that hotels are becoming more aware that it is better to compost food waste, rather than trash it. This food waste can be converted into organic fertilizers.

Brebbia and Pineda (2004) asserted that a hotel is encouraged to carry out environment-friendly practices because of the monetary benefits that the hotel gets after their implementation.

Green Hotelier (2005) opined that big hotel groups have corporate social responsibility programmes which reach out to the surrounding communities and

influence them. However, smaller hotels too play an important role. In a few cases, it is simpler for small hotel groups to introduce eco-friendly policies.

Mensah (2006) defines environmental management by hotels as a 'continuous process adopted through management decisions by monitoring a hotel's activities and appropriate programs and activities devised to reduce the negative environmental impacts'.

Bohdanowicz (2006) observed that as per the Rio Earth Summit held in 1992, tourism is one of the most important spheres where sustainable development can take place. It was seen that the hotel industry had started implementing green practices that were being acknowledged and respected.

Bohdanowicz (2006) revealed that if considered separately, hotels cannot be said to adversely affect the environment. But if taken into account together, they are seen to waste a lot of resources. About seventy-five percent of the adverse effects of hotels on the environment are connected to exploitation of resources.

Singh (2007) revealed that following the international inclination of hotels which choose to 'go green', the Federation of Hotel and Restaurant Association of India (FHRAI) has planned to establish an accreditation committee to certify hotels implementing environment-friendly practices.

Claver-Cortes, Molina-Azorin, Pereira-Moliner & Lopez-Gamero(2007) reviewed that from the 1990's the hotel industry has been going green as a result of changing financial circumstances and also to provide good customer service.

Young George, Mahon & Cumberbatch (2007) stated that owners of hotels must be sensitized to the ecosystems around the hotels so that they realize the effect of their daily operations on these ecosystems.

Greenberg (2007) reviewed that nowadays, most hotels say that they are "sustainable and "green". These green practices do not inconvenience the guests, who say that when they are made aware of these eco-practices, they are happier to stay there.

White (2007) stated that hotels have started implementing various green programmes, not only due to the demand from their business travellers but also because they save money.

Pollock (2007) quoted a survey by TripAdvisor on travellers across the world. According to this, 38 percent of travellers were of the opinion that they gave importance to environmentally-friendly tourism. 38 percent had resided at eco-friendly hotels, while 9 percent particularly booked these hotels. 34 percent travellers were ready to spend more money so that they could stay in green hotels.

Flowers (2008) reported the company policy of the Fairmont Hotels & Resorts that requires its kitchens to utilize organic food that originates in 100 miles. She also reported that Six Senses hotel group of Southeast Asia conserves the seashores at 11 hotels of its group by having a pool sanitation system, which does not use chlorine. This shields the corals and other aquatic life.

Ernst & Young (2008) reviewed that hotel groups have started promoting eco-friendly practices and becoming more sustainable. There are different programmes to ensure that the industry is going green- these are related to education, tree plantation, eco-friendly resorts, energy efficiency etc.

Millar and Baloglu (2008) stated that hotels offering eco-friendly features on their own are called green or environmentally friendly hotels. The number of these features may vary. However, it is not easy to define all green hotels, as hotels carry out diverse endeavors to conserve the environment.

Hotel News Resources (2008) reviewed the results of a study conducted by the American Hotel & Lodging Association on Green Assessment. The chief inspiration that these hotels have mentioned for promoting green practices is firstly conservation of the environment and secondly, to ensure loyalty of the guests.

Raghavan & Vahanvati (2008) stated that hotels in India have started using green products, lessening consumption of energy as well as cutting down expenses. Hotels are implementing green practices as a business policy. A case is of The Orchid Hotel at Mumbai which is the first eco-friendly five-star hotel in Asia. It focuses on

preserving of natural resources however; the level of service given to the guests is not affected.

Kasavana (2008) revealed that showing concern for the environment is in fashion, is noticed and helps to save expenses. The three R's of reduce, reuse and recycle help hotels reduce their consumption of energy, lessen wastage of their inventory and save money; while at the same time showing concern for the environment. It can be seen that a few hotel companies have boosted their image in the public eye, by going green and promoting sustainability.

Graci and Dodd (2009) analyzed that organizations which assimilate their concern for the environment with their business strategies; as well as minimize their environmental impacts find it easier to get investment from the market.

Arieff (2009) said in the recent few years it is seen that green practices are not only implemented in hotel guestrooms, but also in kitchens & bathrooms. Most hotel groups are incorporating these practices as they have realized that there are financial benefits of going green, rather than using it as just a marketing strategy.

Bedlington (2009) stated that in order to examine the extent to which green practices will influence customer's decision about a particular hotel it is essential to first evaluate their approach towards these practices. There are several monetary benefits of implementing green practices for hotels. An increase in the price for providing green facilities and services is not a source of alarm anymore. If green hotels offer equivalent service and facilities as a luxury hotel at the same or lesser price, then luxury market segment as well as eco-sensitive tourists would be happy.

Bhaduri (2009) opined that the hospitality industry has continually paid attention to the concept of being eco-friendly. A few hotels have used it as a promotional tool to increase business, but there are others who genuinely take care to be environment-friendly. She further states that hotels choose to go green because of saving of expenses and also because of the demand from guests for such practices. However, the number of hotels that truly choose this as viable business should be checked.

Anand (2009) stated that small and large organizations belonging to different spheres are trying to incorporate concern for the environment with important business choices,

so as to have trade that is environmentally friendly. At the same time, they must perform better financially, augment their reputation and get reasonable benefits.

“Staff” (2009a) analyzed that an important concern for the hospitality industry is ‘sustainability’. This issue is controlled by factors that are not influenced by the industry. So these concerns are not only related to going green, but also contending with competitors from a different level. Although it might be difficult to follow sustainable practices and get profits, there is substantiation to show that following eco-friendly policies helps to reduce expenditure and improve demand.

“Staff” (2009b) opined that Ecotourism that came into fashion some time ago is now becoming an important ethical factor. The hospitality industry has embraced eco-friendly practices with open arms, as it is a profitable marketing tool. All new hotel properties aim to be recognized for following green practices, while the ones that are already present are trying to incorporate eco-friendly practices like using solar & wind energy, linen reuse, recycling of waste etc.

Heisterkamp (2009) analyzed that customers today are not satisfied with just linen & towel reuse programmes as eco-friendly practices in green hotels. They want eco-friendly hotels to have practices that are socially as well as environmentally conscious. Customers demand efficient use of energy, a section to segregate waste, preservation of water.

Wilfong (2009) analyzed that the hotel industry used up resources rapidly, so it is essential to take dedicated steps to preserve them. Conserving energy, water, & the quality of air are beneficial for the environment; they improve the hotel’s image as well.

Roth (2009) observed that customers wish for eco-friendly holiday choices and hotels gain from this. The American hotel industry of 90 billion dollars is influenced by the go green financial trend. Consumers are giving a lot of importance to eco-friendly practices and hotels as well as their suppliers can have higher income and a larger share of the market if they cater to this upcoming niche.

Roos (2009) observed that luxurious Indian and Chinese hotels follow U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification, to show their commitment to the green cause. The Indian government has increasingly endorsed sustainability and made certifications essential over the last year.

Micioni (2009) revealed that if promoted correctly, the hotel's investors will understand that going green is beneficial for the customers. She further says if hotels have eco-friendly practices that involve the guests, then they are encouraged to accept them. However, the hotels should not make the guests pay extra for these initiatives, otherwise they will not come back to stay again.

Graci & Kuehnel (2010) opined that becoming green has its advantages in terms of employees as well. Today, the employees too are more aware of the environment and thus will prefer employers with the same views. Since attrition levels in the hospitality industry are more, retaining current employees is more cost-effective as against recruiting others and then training them.

Rodrigues (2010) stated that in order to identify the hotel as being green, it is necessary to ascertain and advertise the specific green practices of the hotel; rather than only say you run a green business. The customers would like to know about the suppliers of the business, particular green practices that are implemented and those that have an impact on them as guests. They also want to know the practices that can offset the negative impact that they have on the environment. For hotels where guests are not happy with green practices like linen reuse to save water, concentration on sourcing supplies locally could be one of the modes to sensitize them about the environmental issues.

Chaturvedi (2010) reviewed that increasing green awareness among Indian hotel companies indicates that going green not only enhances the brand worth but also underlines the core values. Since following green practices does not need much maintenance, hotels reduce their expenses and improve the image of the hotel. Expenses incurred on diesel and energy can be reduced with the help of materials that can be recycled and drip irrigation system.

Green Hotelier (2011 a) asserted meetings and events in the times to come, will be green, and this inclination will rise more and more. Hotels need to make arrangements so that they can fulfill these requirements, at times exceed expectations. Otherwise, the meetings and events industry will take its business elsewhere.

Green Hotelier (2011b) observed that since customers have become more conscious of the environment & the society, and make their choices accordingly, hotels try to capitalize on this and make eco-friendly interiors to appeal to this new category of environmentally aware guests.

Reynolds (2011) observed that the hotel industry has the biggest impact on the environment as it consumes a lot of water, cleaning chemicals and electricity day and night. In the 1990s, eco-friendly hotels started coming up in the industry which implemented practices like proper waste management, conserving of water and energy and informing guests on how to be environment friendly.

Ng Kok Meng (2011) observed that customers select products which are green and if they are offered. Also, to achieve sustainable development, it is necessary to make green products.

Tickoo (2011) analyzed that in the past, good hotels would offer the most luxurious experiences. Now, since guests prefer responsible luxury, the hotels have started incorporating sustainable practices in their operations on a large scale.

Englebert (2012) opined that hotels are keen to implement eco-friendly practices to make up for their negative impacts on the environment, as a result of the wide-spread acceptance of eco-tourism. Since there are sustainable options available, hotels are becoming eco-friendly and using materials, water and energy judiciously; at the same time, they provide quality service as well as save money.

Ricaurte (2012) revealed that there are continuous sustainability innovations by the hotel industry. It is easy to craft an eco-friendly world, at the same time convincing the guests that their carbon footprint is lessened. The amalgamation of new services and technologies with ingenious methods for saving money for the hotels leads to innovative practices which might impact standard practices and standards.

Marati (2012) opined that a lot of travellers that were surveyed said that given an opportunity, they preferred to take advantage of minor occasions of making eco-friendly choices in their hotels.

Roddy and Moss (2012) revealed that small cards in rooms encouraging you to participate in towel and linen reuse do not really seem eco-friendly, however there is substantial reduction of water wastage.

Chitravanshi & Idrees (2012) analyzed that India's burgeoning hotel industry is facing sustainability challenges; it is a requirement now not an option. Inadequate resources and increasing expenses can be turned to an advantage. Hotel chains with a global presence are entering the market, accompanied with green practices followed internationally. It is however tough to put all these measures into practice in India.

Ogbeide (2012) observed that a lot of guests are ready to stay in eco-friendly hotels. But, such hotels must offer some enticement to the customers to make them accept the green practices. Also, the hotels must inculcate green practices into the culture of the organization as well as market their green practices to secure an advantage over the competition.

Green Hotelier (2012) observed that responsible procurement means considering the social, ethical and environmental points while deciding about purchasing. Decisions about purchasing can impact the society and the environment, especially for the hospitality and tourism fields as they are compelled to import food and other goods from far away countries in order to serve their guests.

Verma (2012) revealed that an increasing number of ecologically-aware guests prefer hotels that are eco-friendly as compared to those that waste energy and are pressurizing hotels to go green. The hotel industry is recognizing that in the long run, there are advantages like less maintenance and saving of energy, particularly with high energy costs. Since there is better technology which is economical as well, practices that were thought to be very costly some time ago are now easily affordable by a lot of hotels.

Chakraborty (2012) reviewed that rising awareness about the environment have made travellers aware of their carbon footprint. They desire to stay in hotels that have green certification. Due to this, hotels now prefer getting certified in order to show their environmental responsibility.

Chaudhari Agarwal (2012) stated that green hotels are cost-effective and beneficial for the environment. Some time ago, Ecotourism was thought to be a fashion, but now people are taking it seriously. The hospitality industry has seen its chance and seized this opportunity for marketing. All new hotels want to be recognized as green, while the ones that are already there; are integrating practices that are sustainable.

Chaudhari Agarwal (2012) revealed that in India, the web-site Google shows that users search for the term 'green hotel' 2900 times in an average across twelve months. The statistics for the same globally is 60500 times. Hopefully, it could be said that more and more people are becoming aware of the environment; however this may be because there could be some personal gains to be had from this concept.

Mahajan (2012) stated that organizations are trying to make the industry accept green measures. There are associations that encourage airlines, hotels and conference centres to implement eco-friendly practices, and promote them. So, the industry is going a greener way.

Mirza (2012) stated that since the idea of eco-friendly hotels and Ecotels is becoming across the globe, Indian hoteliers too are planning green hotels and implementing environment-friendly practices. New hotels all aim to be recognized as green, while the ones already in existence try to implement green practices in the infrastructure already present.

Dev (2012) opined that activities for Corporate Social Responsibility are vital to hotels that have realized that they help to create a good brand image. This has an effect on their business, apart from the feeling of doing something for the environment or the society. It motivates employees to be included in these initiatives, creating an all-encompassing work culture. This helps in getting employees as well as employee retention.

Table 2.1 Summary of literature review

Sr. no	Author & Year	Main ideas
1	World Travel and Tourism Council (2000)	11% of the GDP of the world is due to the tourism industry.
2	United Nations Environment Programme (2002)	The hospitality industry, a key constituent of the travel & tourism industry
3	World Tourism Organization (2002)	The hospitality industry has its own reasons to conserve the environment; because it is one of the industry's main resources.
4	Alexander (2002)	Food waste contributes to forty six percent of the total waste generated by a hotel.
5	Brebbia and Pineda (2004)	Monetary benefits encourage hotels to carry out environment-friendly practices.
6	Green Hotelier (2005)	Hotel groups have corporate social responsibility programmes which reach out to the surrounding communities and influence them.
7	Mensah (2006)	Definition of environmental management.
8	Bohdanowicz (2006)	Tourism is one of the most important spheres where sustainable development can take place.
9	Singh (2007)	Establishment of accreditation committee to certify hotels implementing environment-friendly practices by the Federation of Hotel and Restaurant Association of India.

10	Claver-Cortes, Molina-Azorin, Pereira-Moliner & Lopez-Gamero(2007)	Hotel industry has been going green as a result of changing financial circumstances and to provide good customer service.
11	Young George, Mahon & Cumberbatch (2007)	Hotels owners must be sensitized to the ecosystems around the hotels.
12	Greenberg (2007)	Most hotels say that they are “sustainable and “green”.
13	White (2007)	Due to the demand from their business travellers, hotels are going green.
14	Pollock (2007)	Survey by TripAdvisor on traveler preferences for going green.
15	Flowers (2008)	Green policies of hotel groups.
16	Ernst & Young (2008)	Different green programmes in the hotel industry.
17	Millar and Baloglu (2008)	Hotels offering eco-friendly features on their own are called green hotels.
18	Hotel News Resources (2008)	Review of results of a study conducted by the American Hotel & Lodging Association on Green Assessment.
19	Raghavan & Vahanvati (2008)	Indian hotels have started using green products, lessening consumption of energy as well as cutting down expenses. Case study of The Orchid Hotel, Mumbai.
20	Kasavana (2008)	Hotel companies have boosted their image in the public eye by going green and promoting sustainability.
21	Graci and Dodd (2009)	Green organizations find it easier to get investment from the market.
22	Arieff (2009)	Hotel groups incorporate green practices for financial benefits instead of just a marketing strategy.

23	Bedlington (2009)	Luxury market segment as well as eco-sensitive tourists would be happy if green hotels offer equivalent service and facilities as a luxury hotel at the same or lesser price, then.
24	Bhaduri (2009)	Some hotels have used eco-friendly concept as a promotional tool to increase business, but others genuinely take care to be environment-friendly.
25	Anand (2009)	Organizations belonging to different spheres are trying to incorporate environment concern with important business choices, to have environmentally friendly trade.
26	“Staff” (2009a)	Sustainability is an important concern for the hospitality industry but it is controlled by factors out of the industry’s influence.
27	“Staff” (2009b)	Ecotourism that came into fashion some time ago is now becoming an important ethical factor.
28	Heisterkamp (2009)	Customers want eco-friendly hotels to have socially as well as environmentally conscious practices.
29	Wilfong (2009)	The hotel industry has used up resources rapidly, so it is essential to take dedicated steps to preserve them.
30	Roth (2009)	Consumers are giving a lot of importance to eco-friendly practices and hotels as well as their suppliers can have higher income and a larger share of the market if they cater to this upcoming niche.
31	Roos (2009)	Luxurious Indian and Chinese hotels

		follow U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification, to show their commitment to the green cause.
32	Micioni (2009)	If hotels have eco-friendly practices that involve the guests, then they are encouraged to accept them.
33	Graci & Kuehnel (2010)	Becoming green has its advantages in terms of employees as well since they too are more aware of the environment and thus will prefer employers with the same views.
34	Rodrigues (2010)	To identify the hotel as being green, it is necessary to ascertain and advertise the specific green practices of the hotel.
35	Chaturvedi (2010)	Increasing green awareness among Indian hotel companies indicates that going green not only enhances the brand worth but also underlines the core values.
36	Green Hotelier (2011 a)	Meetings and events in the times to come, will be green, and this inclination will rise, hence hotels need to fulfill these requirements.
37	Ng Kok Meng (2011)	Customers select products which are green and if they are offered.
38	Tickoo (2011)	Guests prefer responsible luxury.
39	Englebert (2012)	Since there are sustainable options available, hotels are becoming eco-friendly and using materials, water and energy judiciously.
40	Ricaurte (2012)	There are continuous sustainability innovations by the hotel industry.
41	Marati (2012)	If guests are given an opportunity, they

		preferred to take advantage of minor occasions of making eco-friendly choices in their hotels.
42	Roddy and Moss (2012)	There is substantial reduction of water wastage because of small tent cards in rooms that inform guests about the hotel's linen reuse programme.
43	Chitravanshi & Idrees (2012)	India's burgeoning hotel industry is facing sustainability challenges; it is a requirement now not an option.
44	Ogbeide (2012)	Hotels must offer some enticement to the customers to make them accept the green practices.
45	Green Hotelier (2012)	Responsible procurement means considering the social, ethical and environmental points while deciding about purchasing.
46	Verma (2012)	Since there is improved technology which is economical as well, eco-friendly practices that were thought to be very costly some time ago are now easily affordable by a lot of hotels.
47	Chakraborty (2012)	Hotels now prefer getting certified in order to show their environmental responsibility.
48	Chaudhari Agarwal (2012)	All new hotels want to be recognized as green, while the ones that are already there; are integrating sustainable practices.
49	Chaudhari Agarwal (2012)	More people are becoming aware of the environment; probably due to some personal gains to be had from this concept.

50	Mahajan (2012)	There are associations that encourage airlines, hotels and conference centres to implement eco-friendly practices, and promote them.
51	Mirza (2012)	Since eco-friendly hotels and Ecotels are popular across the globe, Indian hoteliers too are planning green hotels and implementing environment-friendly practices.
52	Dev (2012)	Corporate Social Responsibility endeavors help hotels to create a good brand image, which helps to get employees as well as retain them.

2.3. OUTCOME OF LITERATURE REVIEW

Based on the above literature review, we can see that there is sufficient awareness about environment-friendly practices in the hotel industry round the world, as well as in India over the past decade. However, there is no literature on any specific study conducted on green practices followed by the star category hotels and resorts in Pune region of Maharashtra.

Pune region as defined for the purpose of this research work- This is not only a geographical definition of Pune region, but in the course of this study, we have defined Pune region from the tourism point of view, as including Pune city, the townships of Pimpri & Chinchwad, and the hill stations of Lonavala & Khandala, Mulshi, as well as the town of Saswad.

Hence, the main objective of this study is to observe the green practices followed by two to five star category hotels and resorts in Pune region, during a period of 2002 to 2012.

CHAPTER 3

RESEARCH METHDODOLOGY

3.1. Introduction

3.2. Types of research

3.3. Research methodology

3.3.1. Proposed model of research methodology to be followed

3.3.2. Review of literature

3.3.3. Pilot study/survey

3.3.4. Defining of objectives

3.3.5 Formulation of hypothesis

3.3.6. Sampling

3.3.6.1. Sample method

3.3.6.2. Sample size

3.3.7. Finalization of questionnaires

3.3.7.1 Questionnaire design

3.3.8. Data collection

3.3.9. Reliability Testing

3.3.10. Data analysis and testing of hypotheses

3.3.11. Significance of the research

3.3.12. Limitations

3.1. INTRODUCTION

Research can be described as a quest for knowledge, for finding out specific information about a particular subject. Kumar (2011) stated that research is to work within a framework of a set of philosophies, use methods that have been tested for validity and reliability and attempt to be unbiased and objective.

Redman & Mory (1923) define research as a systematized effort to gain new knowledge. Kothari (2004) states that research refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form of solution (s) towards the concerned problem or in certain generalizations for some theoretical formulation.

Adams, Khan & Raeside (2007, 2014) defined research as a diligent search, studious inquiry or investigation or experimentation aimed at the discovery of new facts and findings; or broadly, it may relate to any subject of inquiry with regard to collection of information, interpretation of facts, revision of existing theories or laws in the light of new facts or practical ideas.

Srivastava & Rego (2012) define research as organized systematic data-based scientific inquiry, or investigation into a specific problem undertaken with the purpose of finding answers or solutions to it.

There are questions that one might be curious about, specific problems for which we may have to seek solutions. This can be done through research.

Research strives to uncover solutions using scientifically applied methods.

3.2. TYPES OF RESEARCH

There are several types of research such as Descriptive, Analytical, Applied, Fundamental, Quantitative, Qualitative, Conceptual, Empirical etc.

i. Descriptive Research

To describe the current situation/scenario is the main goal of descriptive research. This includes various types of surveys. The variables cannot be manipulated by the Researcher; he can only record the occurrences. It has to be for measurable variables. For.eg. frequency of business travel of a corporate executive.

ii. Analytical Research

In this type of research, one has to utilize data that is available and evaluate it to reach certain conclusions.

iii. Applied Research

This seeks answers to specific practical issues affecting a particular organization. It includes market research as well as identification of trends.

iv. Fundamental Research

This is basic research which is concerned with theory formulation. It does not seek answers to particular problems; it has a broader outlook and endeavors to discover information which can be used by a broad spectrum of applications

v. Quantitative Research

Srivastava & Rego (2012) stated that if the data involves quantitative aspects like measurement and counting, the research is termed as quantitative. Quantitative techniques generate data in quantities or quantitative format that can be studied and analyzed as per certain parameters.

vi. Qualitative Research

If the research involves study of behavior, attitude etc., it is qualitative. Qualitative techniques emphasize on the analysis of the opinions, preferences, behavior and approaches of the people being studied/surveyed. Here, the impressions gleaned by the Researcher are important.

vii. Conceptual Research

This type of research is done to cultivate new theories or to present different interpretations of those that are already in existence. Kothari (2004) says that it is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones.

viii. Empirical Research

This research is based on data which is capable of being analyzed and corroborated with the help of investigation. It is used to prove or disprove a particular hypothesis put forward by the Researcher.

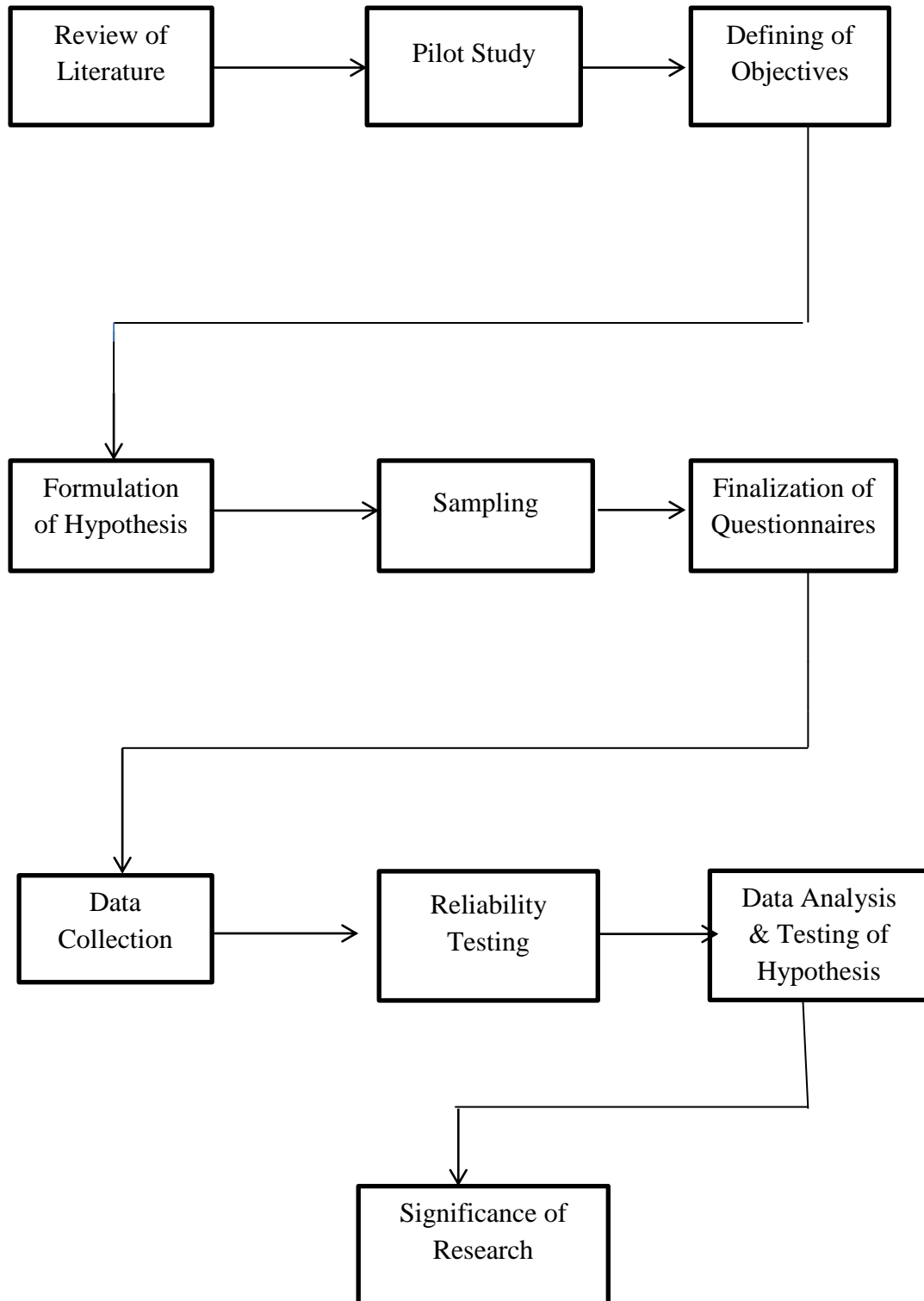
3.3. RESEARCH METHODOLOGY

Kumar (2011) states that research design is a procedural plan that is adopted by the researcher to answer questions validly, objectively, accurately and economically. This particular research is proposed to be carried out with generation of a lot of primary data. So, it will be done by direct observation and study. Moreover, it is research that is based on data which will be used to check if the hypothesis put forth is proved or disproved. So this research will be Empirical in nature as preferences and opinions of the people undergoing the survey will be considered.

In order to give a clear framework of the entire research project, a model of the Research Methodology is mentioned below.

3.3.1. PROPOSED MODEL OF RESEARCH METHODOLOGY TO BE FOLLOWED

Fig-3-1 Diagram of proposed model of research methodology



This framework was finalized after going through previous research that has been carried out on similar topics in the past, as well as after carrying out discussions with a few hotels in Pune.

Pilot questionnaires were designed as a point of commencement for this research.

3.3.2. REVIEW OF LITERATURE

In order to carry out research properly, it is essential to carry out a review of the existing literature on the topic being researched. Adams, Khan & Raeside (2007, 2014) stated that to get information on the kind of work that has already been done in the field, to get to know the subject experts, any problems in researching the topic, if there are any controversies related to the topic etc. the Researcher should refer to all material directly and indirectly connected to the research topic.

According to Sachdeva (2008, 2009, 2011), by reading the research on subjects researchers can get the idea how other researchers have dealt with such problems. So, one understands the background of the problem that is to be studied.

The Literature review for this study was done by reading research articles from international journals, magazines, online newspapers and books. Membership of the British Library, Pune (Online facility) was purchased for a period of two years. Through this facility, digital resource sources like the online journals with a good impact factor, available in the British Library Online Resources were accessed for retrieval of data from the website <http://www.library.britishcouncil.org.in>.

3.3.3. PILOT STUDY/SURVEY

Adams.J, Khan.H & Raeside.R (2007, 2014) say that it is important that all surveys be tested before the actual survey is conducted to ensure that the questionnaire is clear to respondents. After deciding the model of research methodology to be used for this research study, a Pilot study was conducted.

This study at the beginning of the research aids in spelling out the Research Objectives. The Pilot study was done by interviewing 40 guests, 5 Hotels and 3

Travel Agencies, to get an idea as to the type of responses generated. Each category of Respondents had a separate structured Questionnaire, with sub-parts, which was used to interview them. There were questions on whether they were aware of green practices in the hospitality industry, what kind of specific practices did they observe or practice and if they felt it was important for the environment, as well as for business (in case of hotels and travel agencies).

As mentioned above, the data collected through this Pilot survey gives direction to the research. Also, it was at this point that the Researcher came to the conclusion that a few of the questions in the Pilot questionnaires were not eliciting relevant answers; irrelevant information was collected and vital information was not obtained. So, the questionnaires were improvised by converting a few of the open-ended questions into closed questions to get relevant responses. The pilot study gave insight for further research.

3.3.4. DEFINING OF OBJECTIVES

This study focuses on the following objectives & seeks to find out-

1. The extent of implementation of green practices in the hotel industry today.
2. The management involvement in implementation of these practices in two to five star hotel and resorts in Pune Region.
3. The various types of green /eco-friendly practices carried out in all operating departments of the hotel such as Front Office, Housekeeping, Kitchen and Food & Beverage Service, as well as the allied areas.
4. Whether any special kind of training is given to the hotel staff to carry out these initiatives.
5. The degree of costs involved in implementing these practices initially.
6. Whether this investment in implementing these practices is justified, in terms of CSR initiatives, turnover & popularity of the hotels.
7. If in the long run, these initiatives end up being cost effective for the hotel operations, on the whole.
8. Whether the implementation of such practices is a deciding factor for customers to stay at such properties.

9. If there is government support for such kinds of environment-friendly initiatives carried out.
10. The various certifications existing for such practices globally as well as within the country and the number of hotels in this study that are aware of these and have applied for such certifications.
11. The effect of conducting such practices on the overall performance of the hotels.

3.3.5. FORMULATION OF HYPOTHESIS

Hypothesis is the main tool in any research activity. In a layman's context, hypothesis is an assumption that has to be proved correct or incorrect. However, in case of a research project, a hypothesis is a proper question to which solutions have to be found out. It specifies what the Researcher is seeking answers to, and is a statement that can be tested to check if it is valid.

Kumar (2011) put forth that the importance of hypotheses lies in their ability to bring direction, specificity and focus to a research study. They tell a researcher what specific information to collect, and thereby provide greater focus.

Kothari (2004) defines hypothesis as a proposition or a set of proposition set forth as an explanation for the occurrence of some specified group of phenomena either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts.

1. H₁. "Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations."
2. H₂. "The overall performance of the hotels has been positively affected after implementing these practices."
3. H₃. "Implementing such practices in hotels involves substantial costs".

4. H₄. “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these initiatives.”

5. H₅. “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.”

3.3.6. SAMPLING

Sampling means choosing a sub-category of respondents from amongst a population, to assess the features of the entire population.

Kothari (2004) defines sampling as the selection of some part of an aggregate or totality on the basis of which a judgment or inference about the aggregate or totality is made. To get information about the preferences of the population, one can choose a part of it and seek its opinions and apply these to the larger population. It is assumed that the data generated through this sample can be correlated with the data that would have been generated from the entire population.

Kumar (2011) states that sampling is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group.

Israel (2008) puts forth that population is a set of all items being considered for measuring some characteristic. The sample indicates a subset of the population.

It is not possible to survey each and every two to five star hotel in Pune region as mentioned in this research. Also, the number of people visiting hotels in this area for meals, meetings and stays is stupendous. Hence sampling was the only viable option that could be utilized in order to obtain information about the topic being researched.

3.3.6.1. SAMPLE METHOD

In any kind of survey, it is not possible to meet the entire population to get their feedback. But, if a sample is correctly selected, then the results of the survey will match more or less with the opinions of the general population.

Sample design can be done on the basis of two main methods-

1. Probability Sampling
2. Non Probability Sampling

Probability Sampling

Random selection is the basis of Probability sampling. It is also known as chance sampling. Since it is random, every element which exists has the possibility of being a part of the sample. Sachdeva (2008, 2009, 2011) states that Probability or Random sampling gives all members of the population a known chance of being selected for inclusion in the sample.

As per Pannerselvan (2009), there are various methods of probability sampling mentioned below-

- i. Simple random sampling
- ii. Systematic sampling
- iii. Stratified sampling
- iv. Cluster sampling
- v. Multi-stage sampling

Non Probability Sampling

This is also known as deliberate sampling. The participants are selected by the Researcher. It is thought that this small sample with participants will be representative of the whole universe. There is a chance of personal bias of the Researcher affecting results.

As per Pannerselvan (2009), there are various methods of non-probability sampling mentioned below-

- i. Convenience sampling
- ii. Judgment sampling
- iii. Quota sampling
- iv. Snowball sampling

The Researcher has used Probability Sampling Method, specifically Simple Random sampling and has focused on selected two, three, four & five star hotels & resorts in Pune Region which includes Pune city, Pimpri, Chinchwad, Mulshi, Lonavala, Khandala and Saswad.

Simple Random Sampling

This kind of sampling is done for a finite population, in this particular research- two star, three star, four star and five star hotels.

Kothari (2004) explains that random sampling of a finite population is that method of sample selection which gives each possible sample combination an equal probability of being picked up and each item in the entire population to have an equal chance of being included in the sample.

This research utilizes sampling without replacement i.e. once a particular sample has been selected; it is removed from the pool, so that the same sample is not selected again the next time.

3.3.6.2. SAMPLE SIZE

It was difficult to find the exact number of star category hotels in Pune region, the reasons for which are mentioned below-

- i. Not all the hotels in this region that possess the facilities or have upgraded their facilities as per the Ministry of Tourism have actually gone in for the star category formal classification. Most of them simply state that they are of that particular star

category. Hence the list of approved hotels for the year 2012, which was obtained from the MTDC, consisted of just 26 hotels in the formal two star to five star categories.

ii. Another source of finding out the number of hotels in this region was through the Poona Hotelier's Association that has members of star category hotels from Pune, Pimpri, Chinchwad, Saswad, Lonavala, Khandala etc. This too could show only about 50 members.

iii. The Federation of Hotel & Restaurant Association of India website www.fhrai.com only lists the hotels that have got star category rating as per Ministry of Tourism norms.

iv. So, as a via media, it was decided to approach the travel portal www.makemytrip.com for a comprehensive list of hotels that are listed with them as per the star category. This portal has affiliations from most of the hotels and resorts in different cities of India, and on that basis advertises hotels as star category & general ones. At the time of their enrolment with the portal, the hotels have to fill up a registration form where they have to list their star category (if any). As per these statistics compiled from the website till the year 2012, the total number of two to five star hotels in Pune region was- 193. The break-up is mentioned below-

Table-3-1 Distribution of 2 to 5 star hotels & resorts in Pune region till end of year 2012

Sr. No	Area	Five Star	Four Star	Three Star	Two Star
1	Pune including Pimpri Chinchwad	21	27	61	36
2	Saswad	1	--	--	--
3	Lonavala, Khandala and Mulshi	4	2	30	11

So, the sampling population in the area of study i.e. total number of two star, three star, four star and five star hotels was 193.

Sample size-51

Sample Size Calculation

Sample size formula

$$n = \frac{z^2 p(1-p)}{d^2}$$

Source- Daniel (1999)

Sample size formula for the finite population is-

$$\text{New } n = \frac{n}{1 + \left(\frac{n-1}{N}\right)}$$

Explanation of formula-

Where,

n = Sample size

Z = Z statistic for level of confidence = 1.96 for the level of confidence of 95 % (In this study, we present results with 95% confidence intervals (CI))

P = Expected prevalence or proportion = 80%

d = Precision = 0.1

N = Population size = 193

n = sample size = 61.47 with an error limit of 0.04

New n = New Sample Size = 46.80 ≈ 47

The proposed sample size for the research initially consisted of 40 hotels (management & employees of these hotels were approached) and about 400 guests utilizing the facilities of these hotels for stay, meals or banquet facilities were interviewed. The sample size also included 10 travel agents & tour company representatives who book facilities at such properties for their clients.

Since this research is based on hotels & their customers, only a cursory opinion of the travel agencies was sought as to whether there was any guest preference for green hotels while making bookings. So, travel agencies were contacted randomly, without taking into consideration the total population in the area of study.

However, after confirming the number of two to five star hotels in Pune, the sample size of the finite population was calculated and was found to be 47. Around 85 Hotels, 500 guests and 34 travel agencies in the area of research were contacted totally as part of the survey in person, via telephone and by sending emails. Majority of those approached agreed to be interviewed and take the survey. Questionnaires with invalid responses were not considered. Also a few Questionnaires with more than one-third questions left unanswered were taken out, as using them for analysis of data would have led to incorrect results.

Finally, out of all the Respondents, 51 hotels, 402 guests and 20 travel agencies gave valid responses. Thus instead of 40 hotels as initially proposed in the synopsis, since 51 hotels with complete questionnaires were available, they were considered (more than the calculated sample size). This is one-fourth the total population size. Also instead of 10 travel agencies, opinions of 20 were considered.

The break-up of hotel questionnaires considered for this research is mentioned in the table given below-

Table-3-2 Distribution of 2 to 5 star hotels & resorts in Pune region actually surveyed

Sr No	Area	Five Star	Four Star	Three Star	Two Star
1	Pune including Pimpri Chinchwad	14	9	12	6
2	Saswad	1	--	--	--
3	Lonavala, Khandala and Mulshi	2	1	6	0

The period considered for the Research study was for 10 years-from between the financial year 2002 till the end of financial year 2012. Hence hotels which were in

operation in the proposed area of research during the above mentioned-period were only surveyed.

3.3.7. FINALIZATION OF QUESTIONNAIRES

To support or disprove a hypothesis, it is essential to have a well-designed questionnaire. A questionnaire consists of a typed form which has certain questions in a particular order. This is sent to respondents, either in person, or mailed hard or soft copies. It is expected that the respondents go through the questions, understand their meaning and select the response, or write the response that they feel is most apt.

The Researcher has decided to use questionnaires as a tool for the collection of data. Since the proposed sample size was large, it was thought prudent to design specific questionnaires that would generate answers to the questions faced by the Researcher.

In this research study, there were two primary sources from which information had to be sourced and further processed i.e. hotels and the guests who have experienced these facilities. Also, as another dimension, it was considered logical to have an opinion of travel agents/tour operators too.

Hence, there were three kinds of questionnaires designed-one for the management-level employees of hotels, one for the clientele or the guests who have visited the hotels and one for travel agents who make hotel bookings for clients as per their requirements.

The final questionnaires are attached in the Annexure.

3.3.7.1QUESTIONNAIRE DESIGN

As per the Federation of Hotels and Restaurants Association of India (FHRAI)'s Environment Manual (E manual) (2003), there are certain eco-practices that are followed by some hotels, and also mentioned are a few recommendations of Best practices to be followed by Indian hotels. These are related to environment management, energy management, water conservation, waste control and

management, indoor air quality and air pollution control, eco-purchasing, training and human resources and community services.

While designing the final hotel and guest questionnaires, this manual was used as a source of eco- practices, in order to determine which green practices are more likely to be implemented in the hotels; and consequently observed/experienced by the guests.

While carrying out pilot study, literature review and seeking of relevant information from various secondary data sources, it was seen that there were certain eco-friendly practices that were commonly observed. Hence, these were selected and incorporated in the final hotel and guest questionnaires.

3.3.8. DATA COLLECTION

The research study is Survey- based Research for which the data has been collected by conducting detailed interviews and through the structured questionnaires from the selected hotels & resorts, and their clientele in Pune region.

Open eye observation was done, Documentary study and scheduling of interviews with management & staff of various hotel organizations, and their clientele, as well as travel agents & tour companies was carried out.

1. Primary data

This data was obtained by interviewing the management, staff & guests of the various two, three, four & five star hotels and resorts of Pune region, as well as travel agents and tour operators.

Two, Three, Four & Five Star Hotels: With reference to the hotels in Pune region, only two, three, four & five star hotels and resorts were considered.

It must be mentioned that a lot of these hotels and resorts have not gone in for the formal classification from a government agency, but have the mandatory facilities

mentioned for star categorization by the Ministry of Tourism, Government of India and have thus declared themselves to be of that particular category.

Choice of Respondents-

- i. The Management and Employees of these properties were interviewed for information as well as their views. Most of the hotels belonging to international hotel chains emphasize on green practices, hence all employees are made aware of these practices across departments.

There may be certain people like the Executive Housekeeper, the Director of Engineering or Chief Engineer, the Human Resources Manager, the General Manager, representatives from all departments, or even a Specific committee that are delegated with the responsibility of managing eco-friendly practices.

In smaller hotels, the owners or directors themselves are aware of the green practices that are being implemented, if at all.

Hence, the Researcher has approached the person who is most likely to know about the various aspects of green practices being implemented in that particular hotel property across all departments, so that accurate and reliable information based on actual facts can be obtained, which would help in achieving the objectives of this research.

- ii. The customers whose opinion is considered for the research study included the clientele/guests of these hotels, who have booked rooms, or banquet facilities, or come for meals to these places.
- iii. The travel agents & tour companies who book such facilities on behalf of their clients were also be interviewed with the purpose being to find out whether they are aware of such practices & their opinion as to whether their clients take into account environment-friendly criteria while selecting hotels.

2. Secondary Data

Secondary data was collected from-

- i. Various Magazines, Research Journals, Manuals, Government Reports and other Publications related to the Hospitality and Tourism Industry.
- ii. Reference books
- iii. News bulletins and articles published in the newspapers were also an important source for this data.
- iv. Web- sites related to the Hospitality Industry, as well as internet search engines aided in acquiring relevant information.
- v. Any existing Statistical Analysis done by research industries, in the form of Figures, Charts and Tables etc. were also a useful source of secondary data.

3.3.9 RELIABILITY TESTING

To test the reliability of the survey, there were two statistical tests carried out on the data collected from the survey, before data analysis could be done. They are mentioned below-

1. Cronbach's Alpha
2. Kuder Richardson

CRONBACH'S ALPHA

This is a method used to measure the reliability of data that has been obtained from a survey. This data reliability is expressed in the form of stability, equivalence and consistency.

According to Osborne (2008), Cronbach's Alpha co-efficient is a measure of internal consistency reliability and is useful for understanding the extent to which the ratings from a group of judges hold together to measure a common dimension.

Cronbach's alpha assesses how reliably any survey items that are considered to measure the same construct actually do so. Cronbach's alpha values range between 0 and 1 where higher values suggest higher internal consistency. A historical

benchmark value of 0.7 is commonly used to suggest that at least some of the items measure the same construct.

A high Cronbach's alpha is evidence that the items measure the same construct, in this case eco-friendly practices. On the other hand, a low Cronbach's alpha shows that the items have little in common and are not good measures of the single construct.

Formula

Cronbach's α is defined as-

$$\alpha = \frac{K}{K - 1} \left(1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_X^2} \right)$$

Source- Best Practices in Quantitative Techniques -J.W.Osborne

where K is the number of components (K -items), σ_X^2 the variance of the observed total test scores, and $\sigma_{Y_i}^2$ the variance of component i for the current sample of persons.

A commonly accepted rule of thumb for describing internal consistency using Cronbach's alpha is as follows:

Table 3-3 Cronbach's alpha internal consistency

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source- Cronbach's alpha measuring internal consistency -Manerikar V & Manerikar S(2015)

KUDER-RICHARDSON FORMULA

Ary et al (2009) stated that the Kuder-Richardson Formula 20 (K-R 20) is based on the proportion of correct and incorrect responses to each of the items on the test and the variance of the total scores. K-R 20 is applicable to tests whose items are scored dichotomously i.e. 0 or 1.

Because this method gives importance to all items in the test, it is appropriate for checking the reliability of the test used to measure a single trait.

Formula

$$r_{KR20} = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum pq}{\sigma^2} \right)$$

Source- Nursing Research: Generating and Assessing Evidence for Nursing Practice-Polit & Beck (2007)

Where-

- r_{KR20} is the Kuder-Richardson formula 20
- k is the total number of test items
- \sum indicates to sum
- p is the proportion of test takers who pass an item
- q is the proportion of test takers who fail an item
- σ^2 is the variation of the entire test

This formula should be used if each item has a right answer.

Values of KR 20 generally range from 0.0 to 1.0, with higher values representing a more internally consistent instrument.

Justification for using the above two formulae to measure the Reliability Co-efficient-

To assess the green practices followed by hotel is dichotomous. It has only two options yes/no. So to measure the reliability KR20 formula has been used.

Whereas to assess the level of implementation of various categories of green practices followed in the hotel is a rating scale; so to measure the reliability Cronbach's alpha has been used.

Reliability coefficient:

The inter-item reliability coefficients of the items in the hotel and guest questionnaires are presented in the table below.

Table-3-4 Reliability coefficients

Sr No	Scale	Hotel Questionnaire	Guest Questionnaire
1.	Assess the green practices followed by hotel	0.8966 (KR20) $k = 36, \Sigma pq = 5.7067,$ $\sigma^2 = 44.4768$	0.8015 (KR20) $k = , \Sigma pq = 6.6734 ,$ $\sigma^2 = 30.2218$
2.	Assess the level of implementation of various categories of green practices followed in the hotel	0.8837 (Cronbach's alpha) $K = 9, \sigma_X^2 = 54.3906 ,$ $\sum_{i=1}^K \sigma_{Y_i}^2 = 11.6665$	0.8021 (Cronbach's alpha) $K = 5, \sigma_X^2 = 21.7107 ,$ $\sum_{i=1}^K \sigma_{Y_i}^2 = 7.7788$

Results

The Rating Scales were reliable. All the reliability coefficients for the rating scale were above 0.8. These results demonstrate that the rating scale is a reliable test for assessing the green practices followed by hotels as well as for assessing the level of implementation of various categories of green practices followed in the hotel.

3.3.10. DATA ANALYSIS AND TESTING OF HYPOTHESIS

The first step in testing of a hypothesis is formulation of the hypothesis, which has already been done. The next step is to collect suitable information about it. Finally, the data has to be analyzed to reach certain conclusions about the validity of the hypothesis.

The data collected from primary & secondary sources was analyzed by using statistical tools, such as- Percentage, One Sample Proportion test for testing of Hypothesis, Kruskal-Wallis Test, and Chi square test for testing the significance of percentages. A p value of 0.05 or less was considered significant.

3.3.11. SIGNIFICANCE OF THE RESEARCH

1. This research is expected to be beneficial to the hotel industry as it will be a comprehensive reference of the various environment-friendly practices that are carried out in the two star, three star, four star and five star hotels and resorts of Pune region.

2. Students of Hotel Management will also find this study useful as it will give them an idea about various eco-friendly practices that can be carried out in hotels & resorts, and how to involve guests in the same. Thus it will aid in increasing their environmental awareness.

3. Hotels and resorts that are not following any green practices can be encouraged to do so, by increasing their awareness. This study can be source to point them in the direction of incorporating green practices in their operations as well as involve their guests in the same.

4. The society in general will also become aware of need of such green initiatives carried out in the hotel industry & may feel the need in its own way to do its bit for the environment.

5. This research will also be useful for policy makers to think of making the incorporation of green practices mandatory in government policies, as these will help in the optimum use of resources, which leads to saving of resources. Thus, it will benefit the economy as a whole.

6. This research will be a pointer tool to academicians to carry out further research in the area of green practices that can be carried out in hotels and their implications on society and economy.

3.3.12. LIMITATIONS

1. Since the topic based on the management of green practices in hotels is a comprehensive one, ideally it should have been conducted across the country. However, since this Research is an individual one, it is not possible for a single person to do so. Hence, there is a geographical limitation, as this research will be conducted Pune region. So for this Research, Pune region has been defined from the tourism point of view and so will include Pune city, Pimpri, Chinchwad, Lonavala, Khandala, Mulshi and Saswad.

2. Although it has been said that this Research will be carried out in two to five star category hotels, not all the hotels to be surveyed have gone in for the formal classification as per the Ministry of Tourism norms. However, they have the facilities as required for obtaining that particular star classification. Hence, they will be considered as belonging to that particular category. They have not gone in for the formal classification to avoid paying higher taxes.

3. Period of study- it was in the year 2002 that the hotel industry in Pune region started developing rapidly with new hotels coming up. Hence it was decided to base this research on hotels that were in operation over the past 10 years. So, only hotels which started operations prior to the year 2012 in the geographical area of research were approached for the study.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

4.2. Analysis of data

4.2.1. Formulae and tests used

4.2.1.1. Kruskal Wallis test

4.2.1.2. Chi-square test

4.2.1.3. Mean, Median and Standard Deviation (SD)

4.2.1.4. Test for a proportion (One Sample Proportion Test)-for testing of hypothesis

4.3. Hotel questionnaires

4.3.1. Response rate

4.3.2. Organization of findings

4.3.3. Section I-Basic information of the hotels

4.3.4. Section II-Awareness of green practices in hotels and practices followed and testing of Hypothesis H1, H2 & H3

4.3.5. Section III-Green certification awareness

4.3.6. Section IV-Hotel's experiences of guest involvement in green practices

4.3.7. Section V- Association of variables

4.3.7.1. Association between if hotel is part of a chain and other variables

4.3.7.2. Association between whether guests consider green factor important while making bookings and if they are ready to pay extra

4.3.7.3. Association between year of commencement of operations and other variables

4.4. Guest questionnaires

4.4.1. Response rate

4.4.2. Organization of findings

4.4.3. Section I-Demographic characteristics of the respondents

4.4.4. Section II-Awareness and experiences of respondents with green practices and Testing of hypothesis H4 & H5

4.4.5. Section III- Association of variables

4.4.5.1. Association of variable ‘age’ with other variables

4.4.5.2. Association of variable ‘frequency of travel’ with other variables

4.4.5.3. Association of variable ‘purpose of travel’ with other variables

4.4.5.4. Association of variable ‘highest educational qualification’ with other variables

4.4.5.5. Association of miscellaneous variables with other variables

4.5. Travel agency questionnaires

4.5.1. Response rate

4.5.2. Organization of findings

4.1. INTRODUCTION

After the required data has been collected, it is necessary to process it and then analyze it as per the proposed research plan. Kothari (2004) opined that processing of data implies editing, coding, classification and tabulation of collected data so that they are amenable to analysis. In other words to carry out analysis of data, it must be sorted and classified first, then only actual processing can be done.

Sachdeva (2008, 2009, 2011) put forth that data preparation involves checking and editing the data, checking the data for accuracy, tabulating the data, entering the data into the computer, if required; transforming the data; and developing and documenting a database structure that integrates various measures.

Analysis of data involves seeking and establishing relationships amongst the groups of data and calculating certain measures. This organizes data in such a way so as to answer the research question.

Panneerselvam (2009) stated that after data is collected, proper tools and techniques should be used for classification and analysis of data.

For the analysis part of this research SPSS and Minitab software were used.

4.2. ANALYSIS OF DATA

This chapter deals with the analysis and interpretation of data collected for the present study. The data collected in the study does not answer the research question or test hypothesis. It is essential that this data is methodically scrutinized and evaluated in order to identify tendencies and patterns of relationships.

Data analysis seeks to sort, crystallize and get responses from the research data, irrespective of the type of data collected.

Since there were three categories of questionnaires that were used as tools to seek information, each questionnaire was analyzed separately to check the validity of the hypothesis.

Once the analysis of data is done, the outcome has to be presented in a form that will be easily understood by the target audience. Kumar (2011) stated that the main purpose of using data display techniques is to make the findings easy and clear to understand, and to provide extensive and comprehensive information in an effective way.

Basically, data that has been analyzed can be presented in any of the following forms-

1. Text

Text will help in communicating the outcomes. Kumar (2011) opined that the language of well-written documents helps to communicate information correctly.

2. Tables

Tables aid in presenting a plethora of information in limited space. They help in comprehending the written matter i.e. text.

3. Graphs

Graphs are extremely useful in understanding the data within a quick look. Kumar (2011) stated that graphic presentations can make analyzed data easy to understand and effectively communicate what it is supposed to show.

4. Statistical measures

These are various formulae or tests that aid in finding results. Panneerselvam (2009) put forth that the data of a given situation should be characterized by some statistical measures for purpose of estimation or comparison with similar data or making inference about the sample population to which the data belongs.

The presentation of the data collected during this research will be done using all of the above-mentioned forms, wherever applicable. This will make the interpretation of data easier and more effective as well as make the presentation interesting.

4.2.1. FORMULAE AND TESTS USED

The formulae and tests used on the data collected for research includes Percentage, Kruskal-Wallis Test , Chi square test for testing the significance of percentages and One Sample Proportion test for testing of Hypothesis. A p value of 0.05 or less was considered significant.

4.2.1.1. KRUSKAL WALLIS TEST

This test is also known as H test. The observations of all samples are collected together and then given rankings. Rank 1 is given to the smallest value, while the largest value is rank N . This test H is as per chi-square distribution, there is $(K-1)$ degrees of freedom.

Panneerselvam (2004) mentions the Formula for H statistic for Kruskal-Wallis test as explained below, where K is the total number of samples

Formula

$$H = \frac{12}{N(N+1)} \sum_{j=1}^K \frac{R_j^2 - 3(N+1)}{n_j}$$

Source- Research Methodology-R. Panneerselvam

Where R_j is the sum of the ranks of the sample j , $j=1, 2, \dots, K$, and N is the size of the pooled sample ($n_1+n_2+\dots+n_k$).

The calculated H value is to be compared against the chi-square value with $(K-1)$ degrees of freedom at the given significance level of α .

Rule for decision making- If the value of H is more than the table chi-square values, then reject the null hypothesis, otherwise accept the null hypothesis.

4.2.1.2. CHI-SQUARE TEST

This is a test of significance that is used by statisticians while performing analysis of the sample. Kothari (2004) put forth that Chi-square test is a technique which is used by researchers to-

- (i) test the goodness of fit.
- (ii) test the significance of association between two attributes.
- (iii) test the homogeneity or the significance of population variance.

Formula

Chi –square test statistic for testing whether the row and column variables in an $r \times c$ are unrelated (expected cell counts not too small).

$$X^2 = \frac{\sum (\text{observed count} - \text{expected count})^2}{\text{Expected count}}$$

With P - values from the chi-square distribution with $df=(r-1) \times (c-1)$

Where expected count for a cell in a two way table can be calculated by-

$$\text{Expected count} = \frac{\text{row total} \times \text{column total}}{\text{table total}}$$

This describes the relationship using percents, comparison of observed and expected counts and terms of X^2 .

4.2.1.3. MEAN, MEDIAN AND STANDARD DEVIATION (SD)

Formula

- i. Mean

$$\bar{x} = \frac{x_1 + x_2 + \dots + x_n}{n} = \frac{1}{n} \sum x_i$$

- ii. Standard Deviation

$$s = \sqrt{\frac{1}{n-1} \sum (x_i - \bar{x})^2}$$

- iii. Median:

Arrange all observations from smallest to the largest. The median M is located $\frac{(n+1)}{2}$ observations from the beginning of this list.

4.2.1.4. TEST FOR A PROPORTION (ONE SAMPLE PROPORTION TEST)- FOR TESTING OF HYPOTHESIS

Testing of Hypothesis means to check the validity of the statement put forth. To analyze the Hypothesis statistically, the concept of Null Hypothesis and Alternate Hypothesis is used.

Since the Hypothesis of this research was tested using the Minitab software, the formulae for the same from the web-site www.support.minitab.com were utilized.

Null Hypothesis and Alternate Hypothesis are written for each Hypothesis that needs to be tested. Usually, the Alternate Hypothesis has to be proved while the Null Hypothesis is disproved.

Formula

i. Test for a Proportion

Hypothesis H: $\theta = \theta_0$

- Test statistic
$$z = \frac{p - \theta_0}{\sqrt{\frac{\theta_0(1 - \theta_0)}{n}}}$$
- Obtain critical value from normal tables

ii. Comparison of proportions

Hypothesis H: $\theta_1 = \theta_2$

- Calculate
$$p = \frac{n_1 p_1 + n_2 p_2}{n_1 + n_2}$$
- Calculate

$$z = \frac{p_1 - p_2}{\sqrt{p(1-p)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

- Obtain appropriate critical values from normal tables

Selecting a Significance Level or Significance Criterion (P – Value)

Testing of hypotheses is done on level of significance that has been decided earlier and it needs to be mentioned. Kothari (2004) says that generally, in practice, either 5% level or 1% level is adopted for the purpose; the level of significance must be adequate in the context of the purpose and nature of enquiry.

A p value that is ≤ 0.05 means that there is strong indication against the null hypothesis, which means it should be rejected. A p value > 0.05 means that there is less indication against the null hypothesis, which means, it should not be rejected.

Here the alternative hypothesis should be rejected then.

The Confidence Interval

While testing hypotheses statistically, something known as Confidence Interval (C I) is very important. It is also known as risk of error. Depending on the features of the sample, it has to be decided whether to accept or reject the statement. Confidence Interval helps to do this.

According to Kothari (2004), the confidence level or reliability is the expected percentage of times that the actual value will fall within the stated precision limits. Thus, if we take a confidence level of 95%, then we mean that there are 95 chances in 100 (or .95 in 1) that the sample results represent the true condition of the population within a specified precision range against 5 chances in 100 (or .05 in 1) that it does not.

The concept of Confidence Interval is based on the Central Limit Theorem. According to this theorem, if a sample is drawn from the population several times, and an average is taken of the attributes that result, this is equal to the value of the entire population.

Also, the results that are obtained are scattered around the real value. Some of the samples will have a higher value than the true value, while others will have a lower value. In other words, it will create a range of values. There are usually two standard deviations of the original population value within which 95% of the sample values rest.

Which means that with a Confidence Interval of 95%, it can be said that if 95 out of 100 samples are tested, they will show results within the standard deviation range mentioned.

Formula

Approximate CI for proportion θ

$$p \pm 1.96 \sqrt{\frac{p(1-p)}{n-1}}$$

Where p is the observed proportion in the sample.

4.3. HOTEL QUESTIONNAIRES

4.3.1. RESPONSE RATE

Out of the 85 questionnaires that were administered to the hotels, fifty one (51) constituting 60% Response rate were collected. The analysis of opinions of these hotels would be essential in testing of a few hypotheses.

4.3.2. ORGANIZATION OF FINDINGS

The study findings were grouped, analyzed and presented under following headings:

Section I:

This section deals with the basic information of the hotels.

Section II:

This section mainly focuses on the awareness of green practices in hotels and practices followed.

Section III

This section focuses on green certification awareness

Section IV

This section focuses on the hotel's experiences of guest involvement in green practices.

Section V:

This section focuses on association of variables

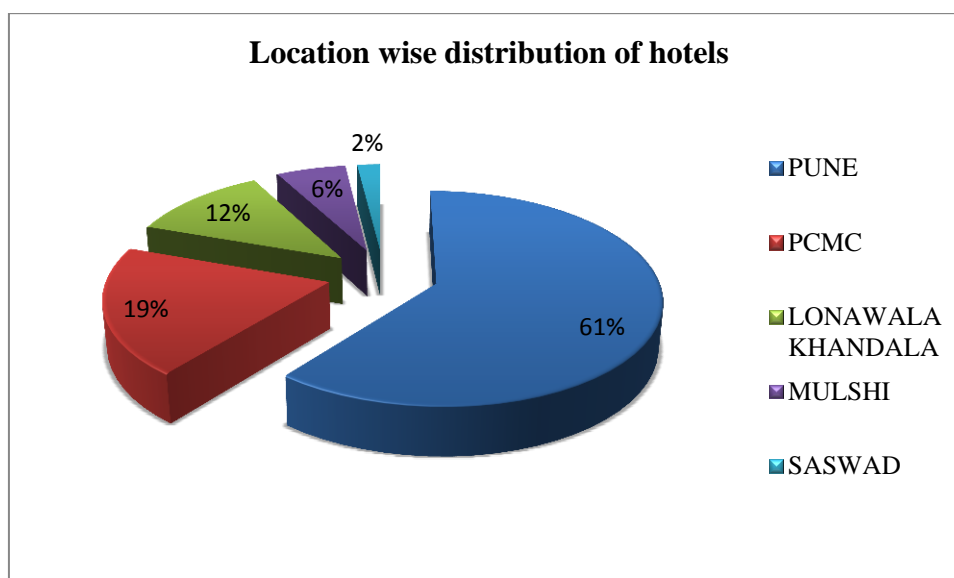
4.3.3. SECTION I-

BASIC INFORMATION OF THE HOTELS

This section presents basic information of the hotels surveyed. This data is presented in the form of tables and their corresponding graphs.

Table 4-1. Location wise distribution of hotels

Location	Frequency	Percentage
PUNE	31	60.78
PCMC	10	19.61
LONAVALA & KHANDALA	6	11.76
MULSHI	3	5.88
SASWAD	1	1.96

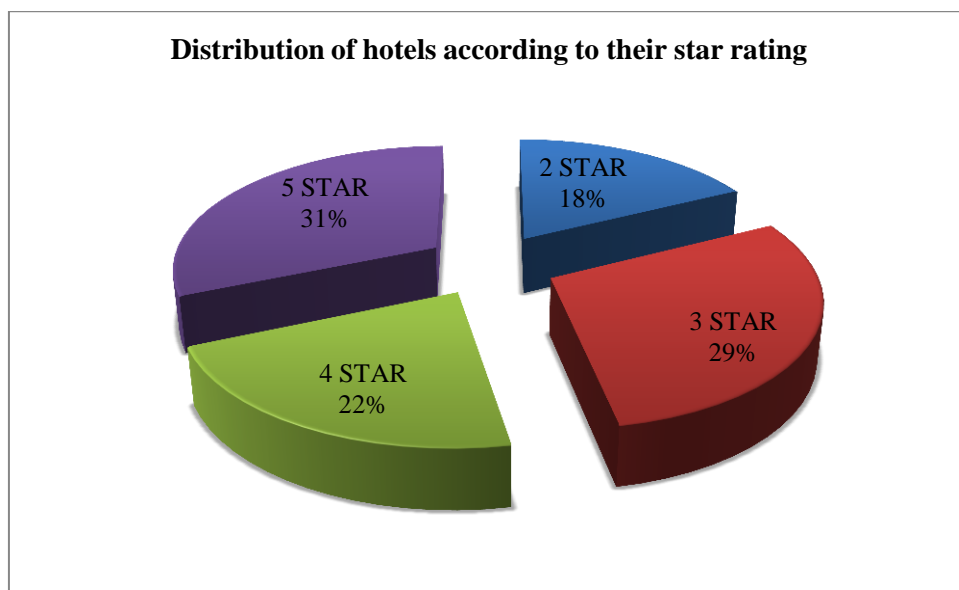


Explanation

We can see from the above table that maximum number of the hotels which responded (60.78%) were in Pune. 19.61% of the hotels were from Pimpri and Chinchwad. 11.76% were from Lonavala and Khandala, 5.88% were from Mulshi and 1.96% from Saswad.

Table 4-2. Distribution of hotels according to their star rating

Hotel rating	Frequency	Percentage
2 STAR	9	17.65
3 STAR	15	29.41
4 STAR	11	21.57
5 STAR	16	31.37



Explanation

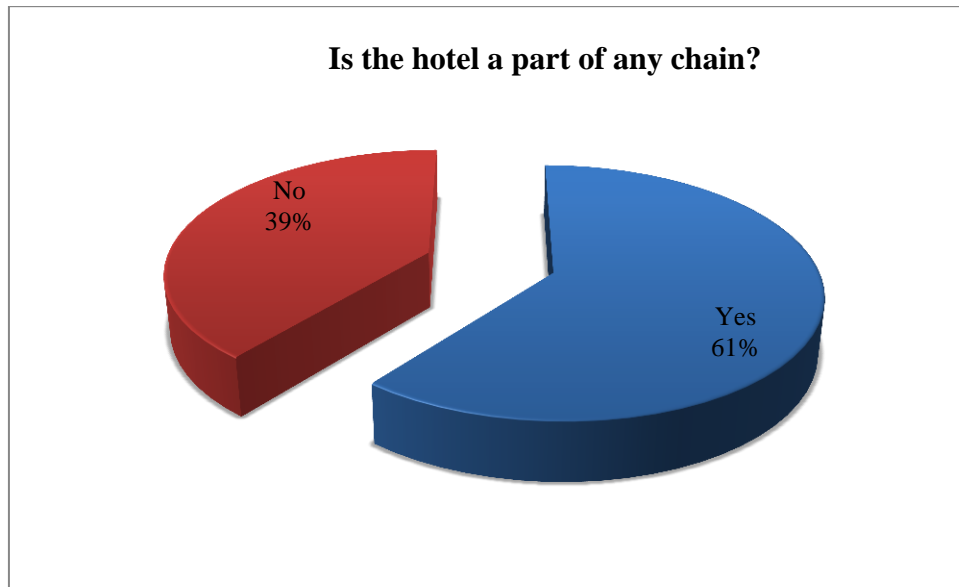
We can see from the above table that largest number of respondents in the total sample size were 5 star hotels (31.37 %), followed by 3 star hotels (29.41%).

4 star hotels were at the number 3 level (21.57%).

2 star hotels were the least (17.65%).

Table 4-3. Is the hotel a part of any chain?

Chain Hotel	Frequency	Percentage
Yes	31	60.78
No	20	39.22

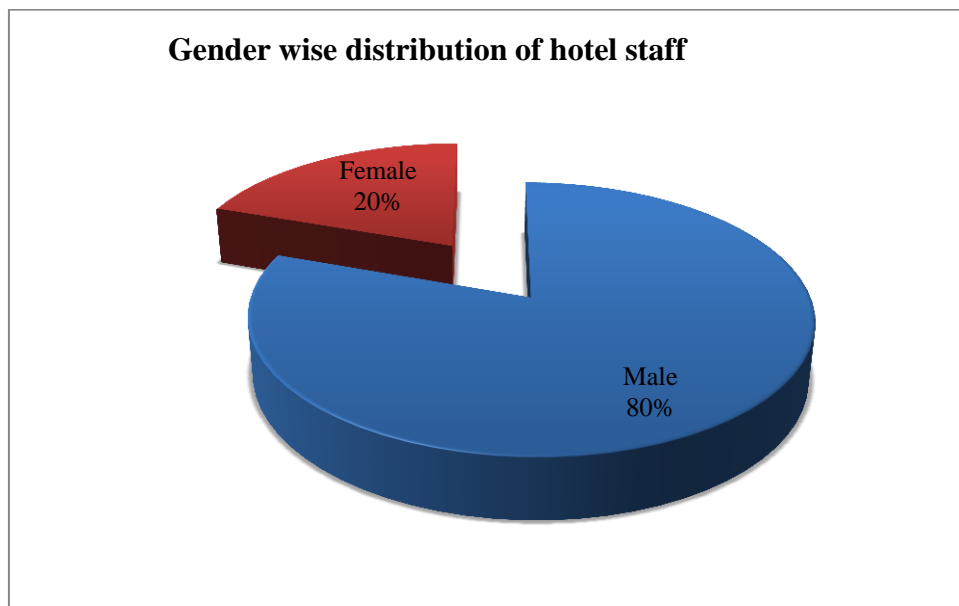


Explanation

We can see from the above table that most of respondents in the total sample size were hotels that were part of some hotel chain or group (60.78%), while there were a lesser number of independent hotels (39.22%).

Table 4-4. Gender wise distribution of hotel staff

Gender	Frequency	Percentage
Male	41	80.39
Female	10	19.61



Explanation

We can see from the above table that most of respondents in the total sample size were males (80.39%), while there were a lesser number of female respondents (19.61%).

4.3.4. SECTION II-

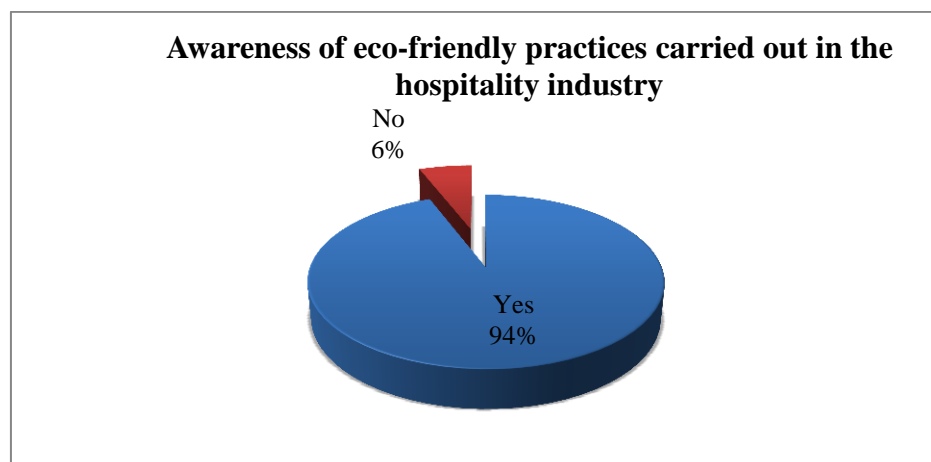
AWARENESS OF GREEN PRACTICES IN HOTELS AND PRACTICES FOLLOWED AND TESTING OF HYPOTHESIS H1, H2 & H3

This section presents the awareness of green practices in hotels as well as the green practices followed by them. This data is presented in the form of tables and their corresponding graphs.

This section also presents the results of testing of three Hypothesis- H₁ (H₀₁ and H₁₁), H₂ (H₀₂ and H₁₂) and H₃ (H₀₃ and H₁₃)

Table 4-5. Awareness of eco-friendly practices carried out in the hospitality industry

Awareness of eco-friendly practices carried out in the hospitality industry	Frequency	Percentage	95% CI
Yes	48	94.12	0.83-0.98
No	3	5.88	



Explanation

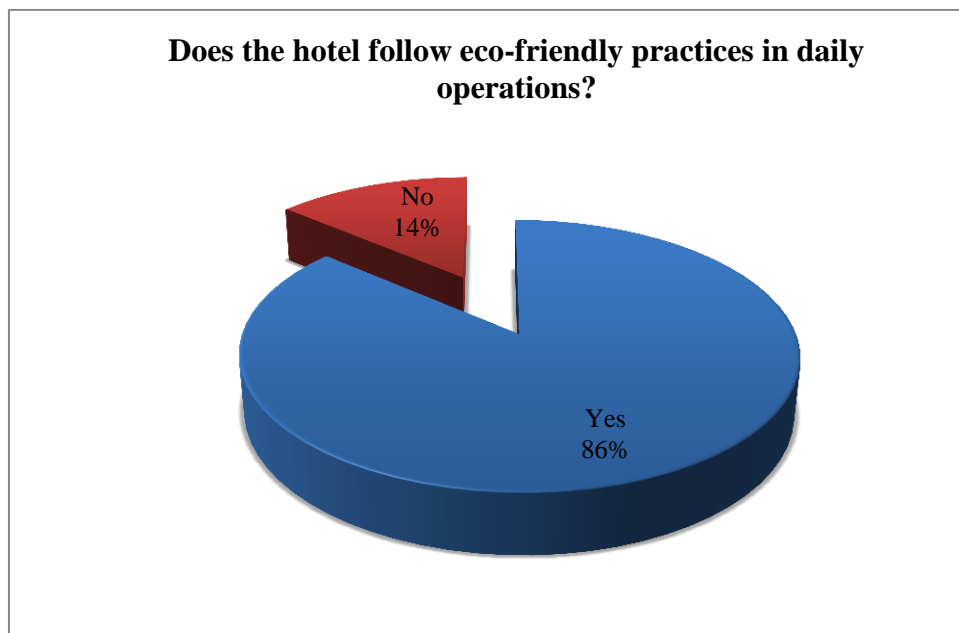
We can see from the above table that most of respondents in the total sample size were aware of eco-friendly practices carried out in the hospitality industry (94.12%), while a few respondents were unaware of the eco-friendly practices (5.88%).

As the sample proportion value (0.9412) is within the confidence interval limits, we can say that 94% of the hotels were aware of eco-friendly practices carried out in the hospitality industry.

Thus it can be said that 83% to 98% of the hotels are aware of eco-friendly practices carried out in the hospitality industry.

Table 4-6. Eco-friendly practices followed in daily operations

Does the hotel follow eco-friendly practices in daily operations	Frequency	Percentage	95% CI
Yes	44	86.27	0.75-0.94
No	7	13.73	



Explanation

We can see from the above table that most of respondents in the total sample size said that the hotels followed eco-friendly practices in daily operations (86.27%), while a few respondents said that they did not follow eco-friendly practices (13.73%).

As the sample proportion value (0.8627) is within the confidence interval limits, we can say that 86% of the hotels followed eco-friendly in daily operations.

Thus it can be said that 75% to 94% of the hotels follow eco-friendly practices carried out in the hospitality industry.

TESTING OF HYPOTHESIS H₁

H₁. “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”

For the purpose of testing this hypothesis, there were 3 ways in which the hypothesis was defined-

1. The Null Hypothesis (H_{01a}) and Alternate (H_{11a}) Hypothesis were defined as under-

Table 4-7. Testing of Hypothesis H_{1a}

Hypothesis	P-Value	Decision
H _{01a} . Majority of the hotels and resorts do not follow eco-friendly practices in daily operations Vs. H _{11a} . Majority of the hotels and resorts follow eco-friendly practices in daily operations	0.000**	Reject H _{01a}

** : Highly Significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Does the hotel follow eco-friendly practices in daily operations?

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-44

N-51

Sample p- 0.862745

95% Lower Bound- 0.757601

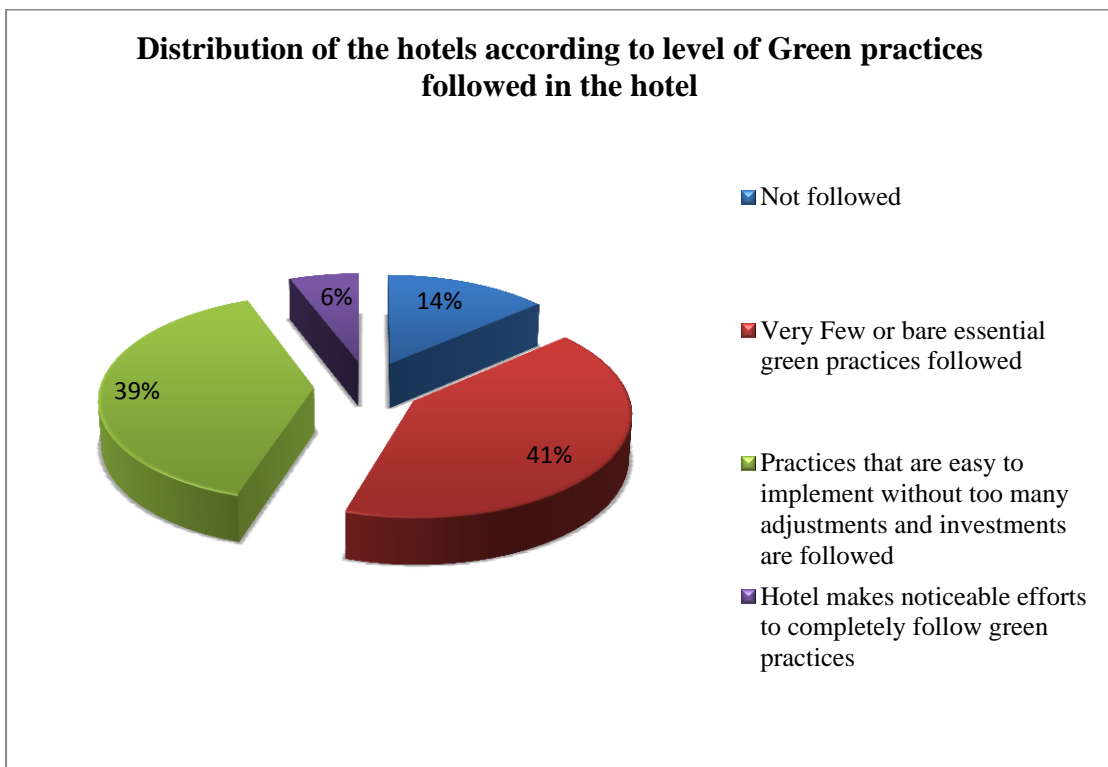
P-Value- 0.000

Source- Minitab Output

As p-value is very less i.e.0.000, lesser than 0.05, we reject H_{01a} and accept H_{11a} and conclude that majority of the hotels and resorts follow eco-friendly practices in daily operations.

Table 4-8. Distribution of the hotels according to level of Green practices followed in the hotel

Green practices followed in the hotel	Frequency	Percentage
Not followed	7	13.73
Very Few or bare essential green practices followed	21	41.18
Practices that are easy to implement without too many adjustments and investments are followed	20	39.22
Hotel makes noticeable efforts to completely follow green practices	3	5.88



Explanation

We can see from the above table that amongst all the respondents, 13.73% said that they do not follow green practices at all.

Amongst the hotels that said they followed green practices, 41.18%, said that they followed very few or bare essential green practices in their daily operation.

39.22% said that they followed practices that are easy to implement without too many adjustments or investments.

Only 5.88 % of the respondents said that the hotel makes noticeable efforts to completely follow green practices.

Rate your overall response on a scale of 1 to 5, with 1 being least and 5 being maximum value to show the level of implementation of various categories of green practices followed in the hotel.

Table 4-9. Rating of responses to show level of implementation of various categories of green practices in hotels

Rate	1		2		3		4		5	
	<i>f</i>	<i>f in %</i>	<i>f</i>	<i>f in %</i>	<i>f</i>	<i>f in %</i>	<i>f</i>	<i>f in %</i>	<i>f</i>	<i>f in %</i>
Waste Management	2	4.55	14	31.82	13	29.55	11	25.00	4	9.09
Water conservation	6	13.64	10	22.73	13	29.55	12	27.27	3	6.82
Green cover & Tree Plantation Programme	22	50.00	9	20.45	10	22.73	2	4.55	1	2.27
Energy Saving	4	9.09	7	15.91	16	36.36	13	29.55	4	9.09
Reducing Fuel Consumption	33	75.00	4	9.09	3	6.82	2	4.55	2	4.55
Eco-friendly room supplies & cleaning agents	16	36.36	9	20.45	11	25.00	7	15.91	1	2.27
Green Banqueting	9	20.45	6	13.64	16	36.36	12	27.27	1	2.27
Green Certification	38	86.36	0	0.00	1	2.27	1	2.27	4	9.09
Air Pollution control	33	75.00	2	4.55	4	9.09	4	9.09	1	2.27

Explanation

1. Waste Management

From the above table it can be seen that 4.55% of the respondents rated the implementation of Waste Management practices at 1 in their hotel. 31.82% of the respondents rated it at 2. 29.55% rated it at 3. 25% rated it at 4.

Only 9.09% of the respondents rated it at 5.

2. Water Conservation

From the above table it can be seen that 13.64 % of the respondents rated the implementation of Water Conservation practices at 1 in their hotel. 22.73 % of the respondents rated it at 2. 29.55% rated it at 3. 27.27 % rated it at 4.

Only 6.82% of the respondents rated it at 5.

3. Green cover & Tree Plantation

From the above table it can be seen that 50 % of the respondents rated the implementation of Green cover and tree plantation practices at 1 in their hotel. 20.45 % of the respondents rated it at 2. 22.73% rated it at 3. 4.55% rated it at 4.

Only 2.27% of the respondents rated it at 5.

4. Energy Saving

From the above table it can be seen that 9.09 % of the respondents rated the implementation of Energy saving practices at 1 in their hotel. 15.91 % of the respondents rated it at 2. 36.36 % rated it at 3. 29.55 % rated it at 4.

Only 9.09 % of the respondents rated it at 5.

5. Reducing Fuel Consumption

From the above table it can be seen that 75 % of the respondents rated the implementation of Reducing fuel consumption practices at 1 in their hotel. 9.09 % of the respondents rated it at 2. 6.82% rated it at 3. 4.55 % rated it at 4.

Only 4.55 % of the respondents rated it at 5.

6. Eco-friendly room supplies

From the above table it can be seen that 36.36 % of the respondents rated the implementation of Eco-friendly room supplies at 1 in their hotel. 20.45 % of the respondents rated it at 2. 25 % rated it at 3. 15.91% rated it at 4.

Only 2.27% of the respondents rated it at 5.

7. Green Banqueting

From the above table it can be seen that 20.45% of the respondents rated the implementation of Green Banqueting practices at 1 in their hotel. 13.64 % of the respondents rated it at 2. 36.36% rated it at 3. 27.27 % rated it at 4.

Only 2.27 % of the respondents rated it at 5.

8. Green Certification

From the above table it can be seen that 86.36% of the respondents rated the implementation of Green Certification practices at 1 in their hotel. 0% of the respondents rated it at 2. 2.27% rated it at 3. 2.27% rated it at 4.

Only 9.09 % of the respondents rated it at 5

9. Air Pollution control

From the above table it can be seen that 75 % of the respondents rated the implementation of Air pollution control practices at 1 in their hotel. 4.55 % of the respondents rated it at 2. 9.09% rated it at 3. 9.09% rated it at 4.

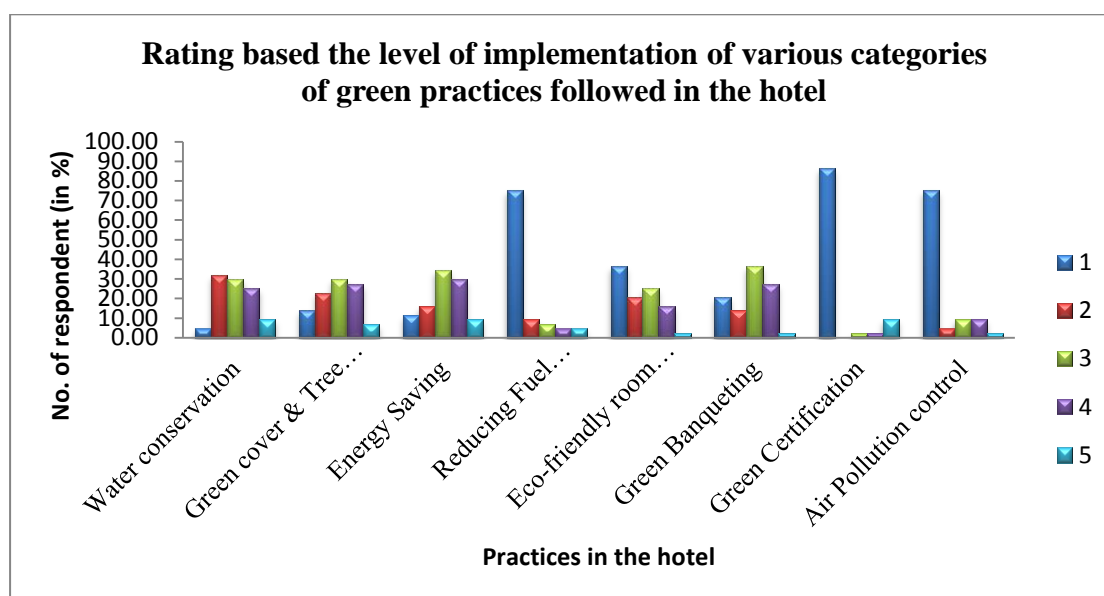
Only 2.27% of the respondents rated it at 5

KRUSKAL-WALLIS TEST

Table 4-10. Kruskal Wallis Test Rating based the level of implementation of various categories of green practices followed in the hotel

Descriptive statistics	Median	SD	H value	p-value
Waste Management	3	1.067	102.06	0.000**
Water Conservation	3	1.158		
Green cover & Tree Plantation	1.5	1.061		
Energy Saving	3	1.137		
Reducing Fuel Consumption	1	1.109		
Eco-friendly room supplies	2	1.188		
Green Banqueting	3	1.138		
Green Certification	1	1.248		
Air Pollution control	1	1.127		

Kruskal-Wallis Test, **: Highly significant difference



Explanation

The above chart explains the Mean and Median rating of the level of implementation of various categories of green practices by the hotel. The Standard Deviation is also mentioned.

1. Waste Management

The Median rating of the respondent participation is 3 with Standard Deviation of 1.067.

2. Water Conservation

The Median rating of the respondent participation is 3 with Standard Deviation of 1.158.

3. Green cover & Tree Plantation

The Median rating of the respondent participation is 1.5 with Standard Deviation of 1.061.

4. Energy Saving

The Median rating of the respondent participation is 3 with Standard Deviation of 1.137.

5. Reducing Fuel Consumption

The Median rating of the respondent participation is 1 with Standard Deviation of 1.109.

6. Eco-friendly room supplies

The Median rating of the respondent participation is 2 with Standard Deviation of 1.188.

7. Green Banqueting

The Median rating of the respondent participation is 3 with Standard Deviation of 1.138.

8. Green Certification

The Median rating of the respondent participation is 1 with Standard Deviation of 1.248.

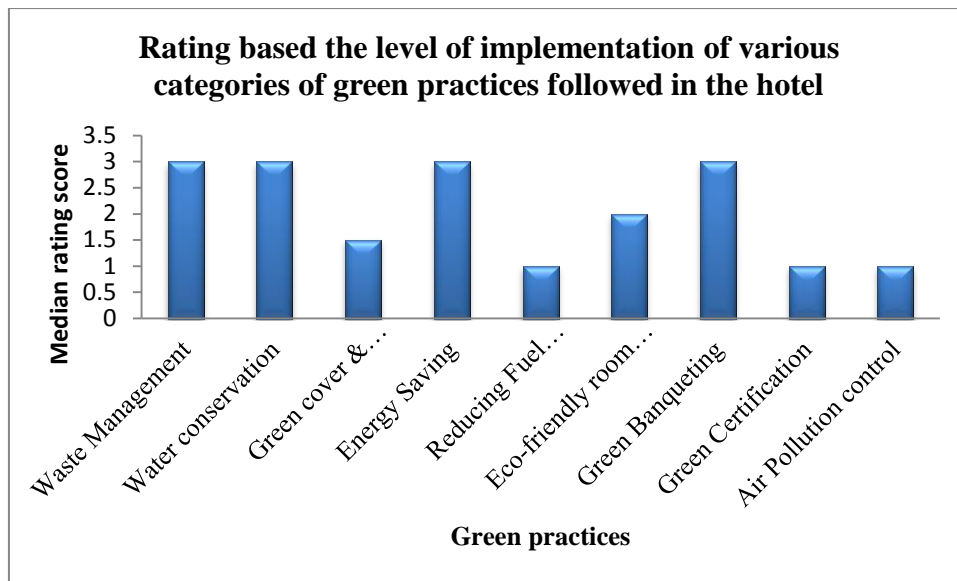
9. Air Pollution control

The Median rating of the respondent participation is 1 with Standard Deviation of 1.127.

Conclusion

The Kruskal-Wallis statistic for the data is **102.06** and the p-value is **0.000**. Because the p-value is very very small (less than the common α -level of 0.05), the test is highly significant. Thus, we can conclude that the level of implementation of various categories of green practices followed in the hotel is different.

Graph 4-1. Median Rating Score



Explanation

From this table and chart we can see the ratings given by the respondents to show the level of implementation of the various green practices carried out in the hotel in the order of highest to lowest-

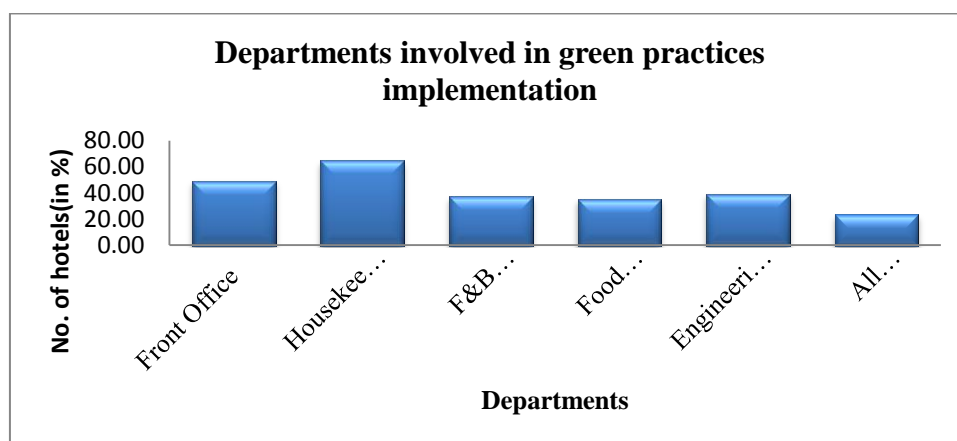
1. Waste Management, Water Conservation, Energy Saving and Green Banqueting- Highest Median rating of 3.
2. Eco-friendly Room Supplies- Highest Median rating of 2.
3. Green Cover and Tree Plantation- Highest Median rating of 1.5.
4. Reducing Fuel Consumption, Green Certification and Air Pollution Control- Highest Median rating of 1

So we conclude that most of the respondent hotels have implemented Water Management, Water Conservation, Energy Saving and Green Banqueting categories of green practices, each with the highest median rating of 3.

Very few respondents have implemented the following categories of green practices – Reducing Fuel Consumption, Green Certification and Air Pollution Control each with the lowest median rating of 1.

Table 4-11. Departments involved in green practices implementation

Department	Frequency	Percentage
Front Office	25	49.02
Housekeeping	33	64.71
F&B Service	19	37.25
Food production	18	35.29
Engineering & maintenance	20	39.22
All departments	12	23.53



Explanation

This question was a multiple choice one, where the respondents had to select the various departments in their hotel that were involved in implementing green practices. From the above table we can see that 64.71% of the respondents said that Housekeeping department was involved in implementing green practices in the hotel.

49.02% said Front Office department implemented green practices.

39.22% of the respondents said that Engineering and Maintenance Department implemented green practices.

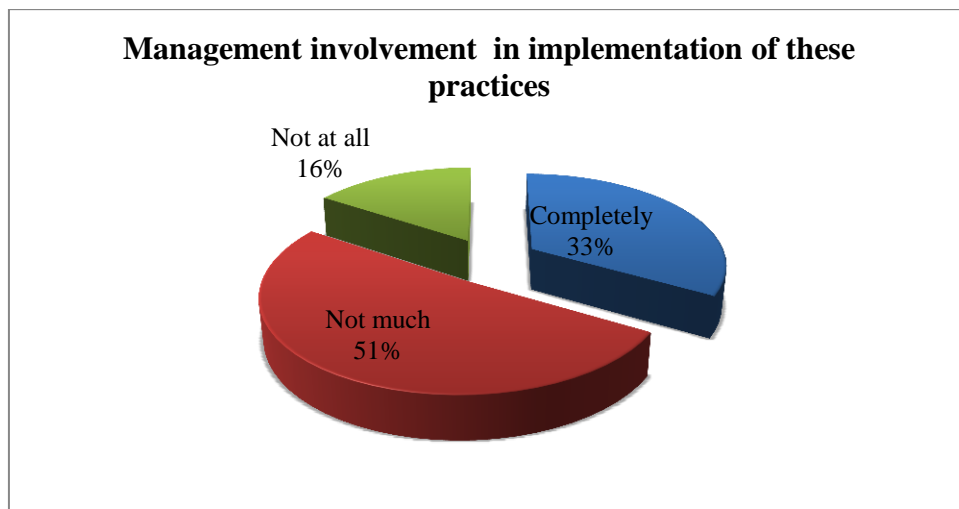
37.25% said Food and Beverage Service department implemented green practices.

35.29% said Food Production department implemented green practices.

23.53% of the respondents said that all departments were involved in implementing green practices in the hotel.

Table 4-12. Management involvement in implementation of these practices

Management Involvement	Frequency	Percentage
Completely	17	33.33
Not much	26	50.98
Not at all	8	15.69



Explanation

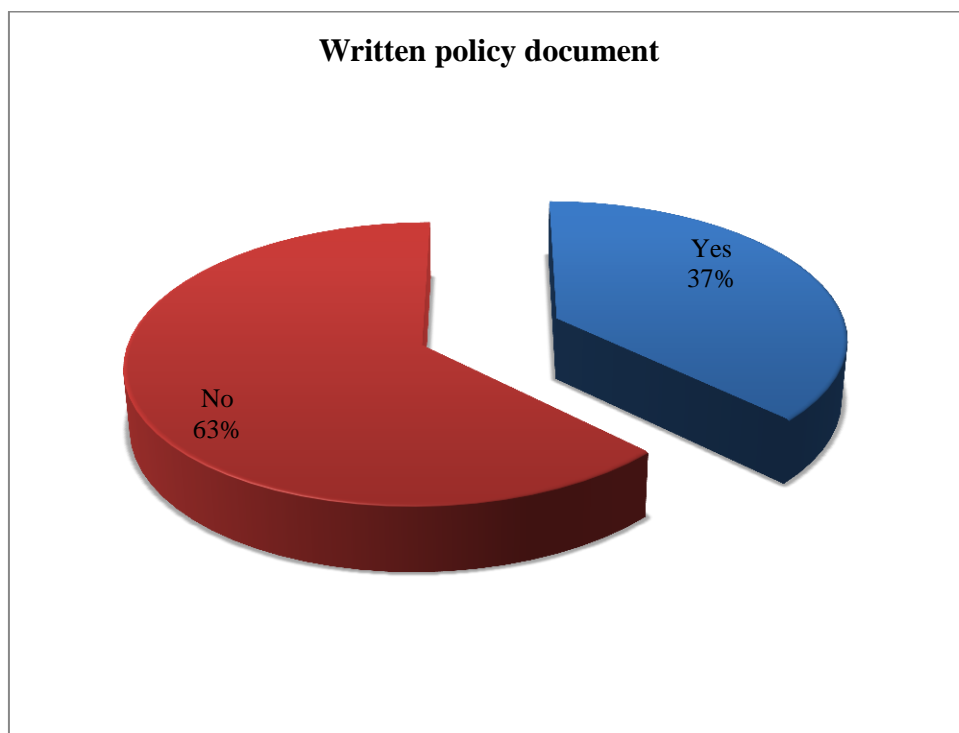
From the table above, it can be seen that half the hotels surveyed (50.98%) said that the Management of the hotel was not much involved in implementation of green practices.

One third of the hotels surveyed (33.33%) said that the Management was completely involved in the implementation of green practices.

15.69% said that the Management was not at all involved in implementation of green practices.

Table 4-13. Written policy document

Does the hotel have a written policy document?	Frequency	Percentage	95% CI
Yes	19	37.25	0.24-0.52
No	32	62.75	



Explanation

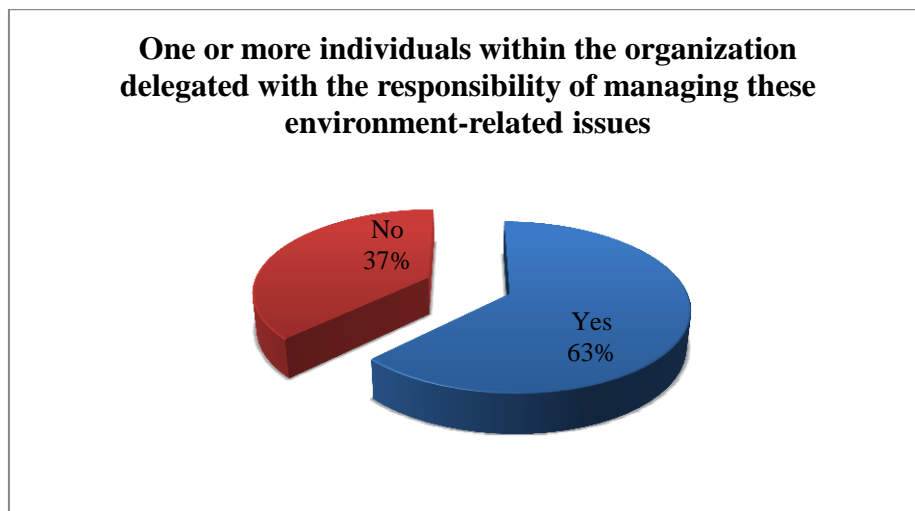
From the above-table it can be seen that less than half the hotels surveyed (37.25%) have a written policy document.

Majority of the hotels (62.75%) do not have a written policy document for the implementation of green practices.

As the sample proportion value is within the confidence interval limits (0.3725), we can say that 37% of the hotels surveyed have a written policy document on green practices. Thus it can be said that 24% to 52% of the hotels have a written policy document.

Table 4-14. One or more individuals within the organization delegated with the responsibility of managing these environment-related issues

Are one or more individuals within the organization delegated with the responsibility of managing these environment-related issues?	Frequency	Percentage	95% CI
Yes	32	62.75	0.48-0.76
No	19	37.25	



Explanation

From the above table it can be seen that 62.75% of the hotels surveyed have specific individuals within the organization delegated with the responsibility of managing these environment-related issues.

37.25% of the hotels do not have any particular individual responsible for environment-related issues.

As the sample proportion value (0.6275) is within the confidence interval limits, we can say that 62.75% of the hotels have specific individuals/staff members responsible for environment-related issues.

Thus it can be said that 48 to 76% hotels have specific individuals/staff members responsible for environment-related issues.

TESTING OF HYPOTHESIS H₁

H₁. “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”

2. The Null Hypothesis (H_{01b}) and Alternate (H_{11b}) Hypothesis were defined as under-

Table 4-15. Testing of Hypothesis H_{1b}

Hypothesis	P-Value	Decision
<p>H_{01b}. Majority of the hotels and resorts do not have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues</p> <p style="text-align: center;">Vs.</p> <p>H_{11b}. Majority of the hotels and resorts have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues</p>	0.000**	Reject H _{01b}

** : Highly Significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Are one or more individuals within the organization delegated with the responsibility of managing these environment-related issues?

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-32

N-51

Sample p- 0.627534

95% Lower Bound- 0.483601

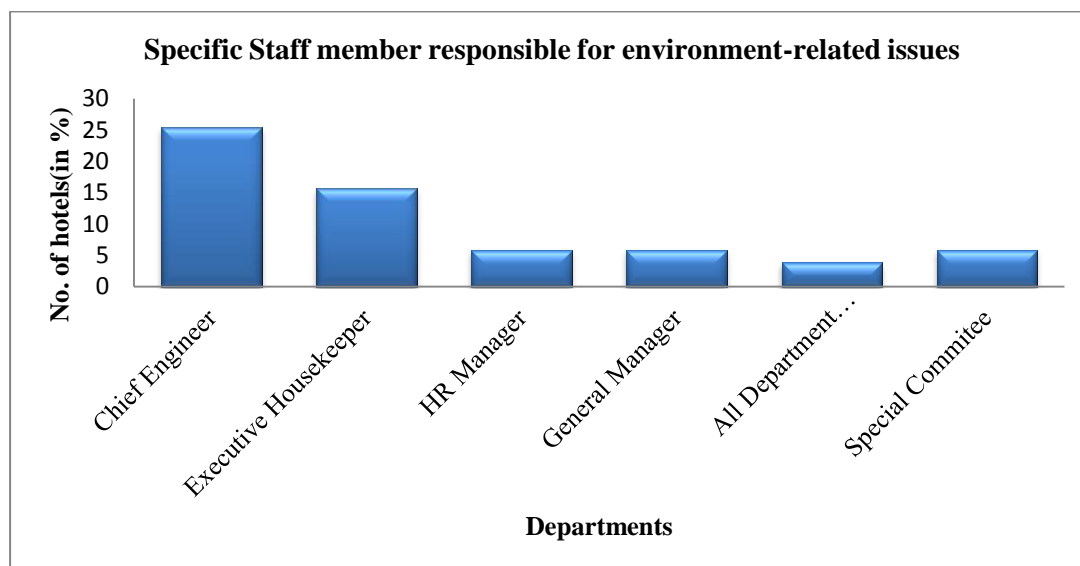
P-Value- 0.000

Source- Minitab Output

As p-value is very less i.e.0.000, lesser than 0.05, we reject H_{01b} and accept H_{11b} and conclude that majority of the hotels and resorts have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues.

Table 4-16. Specific Staff member responsible for environment-related issues

Sr. No	In charge	Frequency	Percentage
i.	Chief Engineer	13	25.49
ii.	Executive Housekeeper	8	15.69
iii.	HR Manager	3	5.88
iv.	General Manager	3	5.88
v.	All Department Representatives	2	3.92
vi.	Special Committee	3	5.88



Explanation

From the table above it can be seen that majority (25.49%) of the respondents said that the Chief Engineer is responsible for environment-related issues in the hotel.

15.69% of the respondents said that the Executive Housekeeper is responsible for these issues.

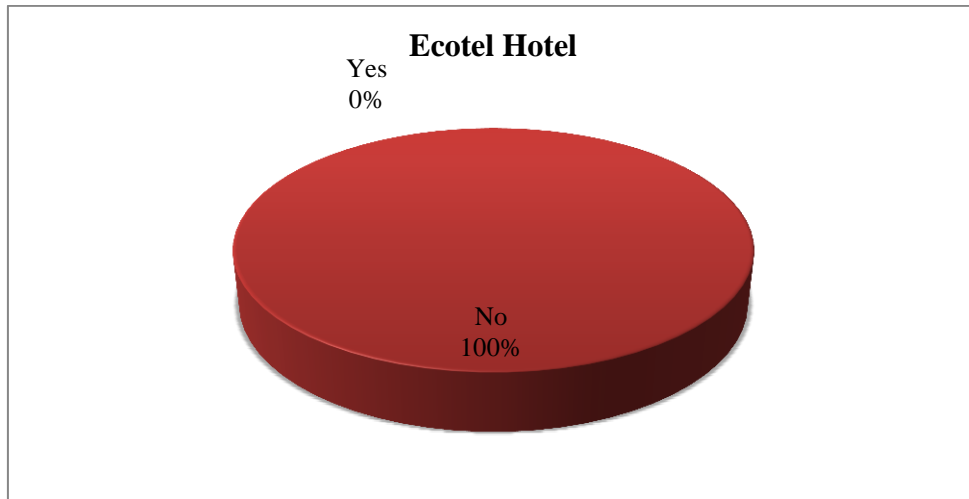
In 5.88% of the hotels, the General Manager is responsible for this, while the HR Manager is responsible in another 5.88% of the responding hotels.

5.88% of the respondents report that there is a Special Committee for environment-related issues in the hotel.

In 3.92% of the hotels, there are representatives from all departments who are responsible for these issues.

Table 4-17. Is the hotel an Ecotel?

Is the hotel an Ecotel	Frequency	Percentage
Yes	11	100
No	0	0.00

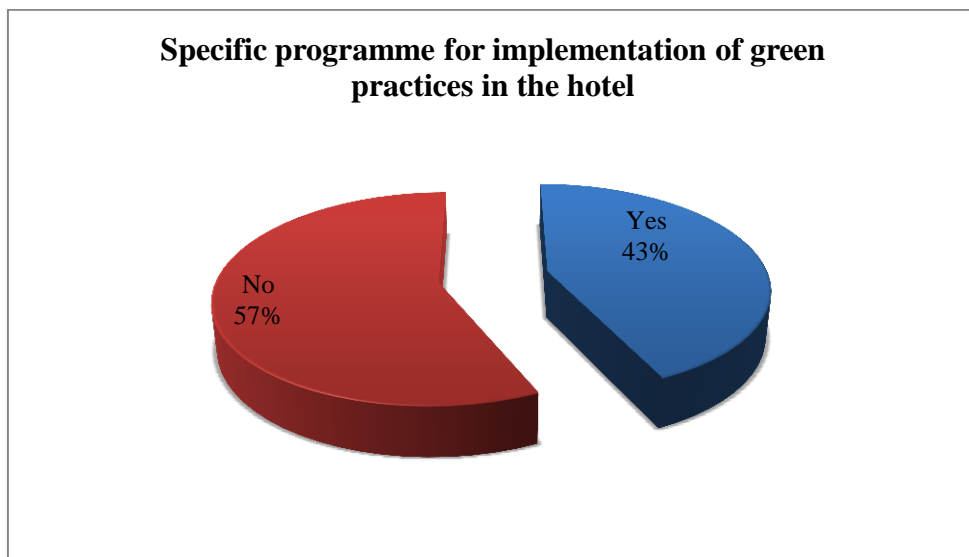


Explanation

From the above table, it is clear that none of the respondents surveyed have said that the hotel is an Ecotel. So, 100% hotels have said that they are not Ecotels i.e. have not gone in for Ecotel certification.

Table 4-18. Specific programme of hotel group for implementation of green practices

Specific programme for implementation of green practices in the hotels	Frequency	Percentage	95% CI
Yes	22	43.14	0.29-0.58
No	29	56.86	



Explanation

From the table above we can see that less than half of the respondents (43.14%) have a specific programme for the implementation of green practices.

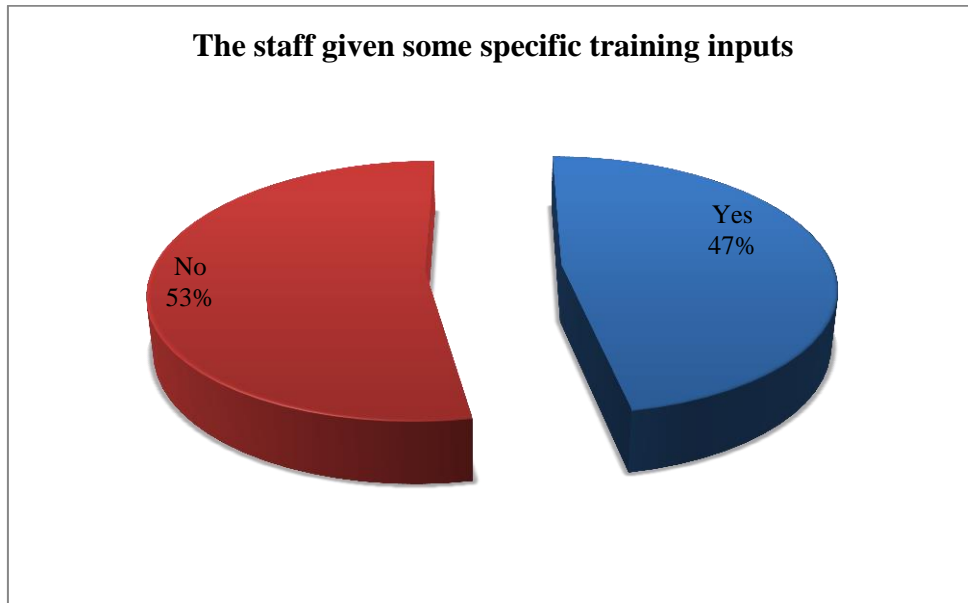
More than half the respondents (56.86%) do not have any such programme for the implementation of green practices.

As the sample proportion value (0.4314) is within the confidence interval limits, we can say that 43.14% of the hotels have a specific programme for the implementation of green practices.

Thus it can be said that 29% to 58% of the hotel have a specific programme for the implementation of green practices.

Table 4-19. Is the staff given some specific training inputs by the hotel regarding implementation of these practices?

The staff given some specific training inputs	Frequency	Percentage	95% CI
Yes	24	47.06	0.33-0.62
No	27	52.94	



Explanation

From the table above, it is seen that less than half the respondent hotels (47.06%) give specific training inputs to the staff members regarding implementation of green practices.

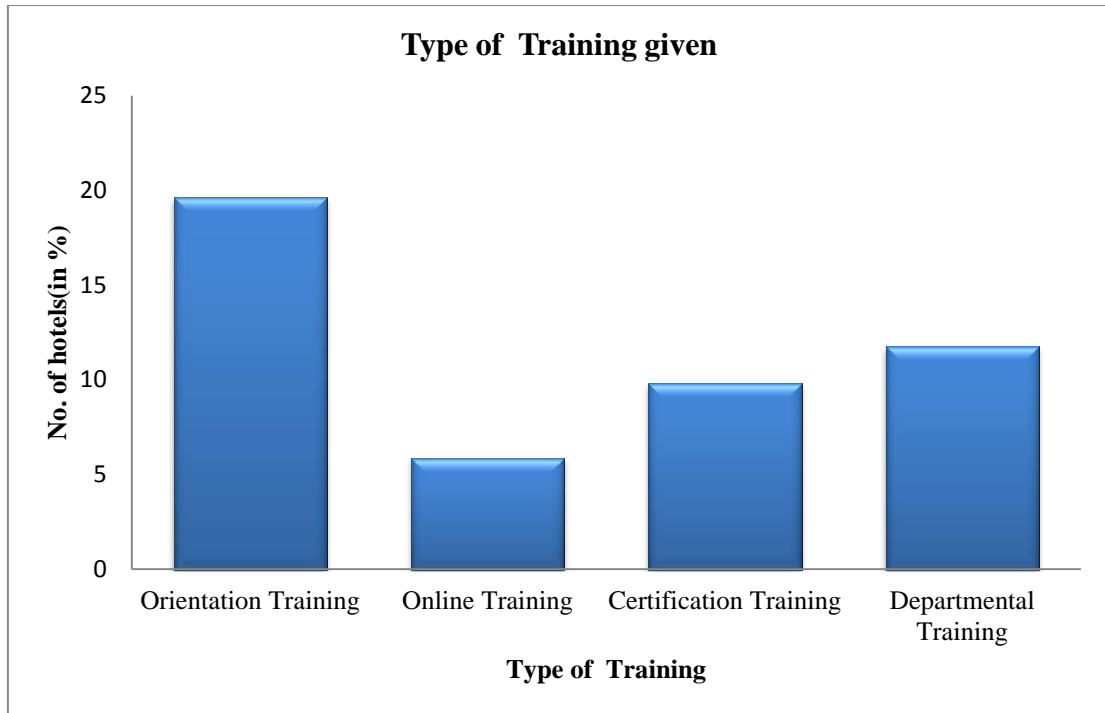
More than half the hotels (52.94%) do not give specific training inputs to the staff members regarding implementation of green practices.

As the sample proportion value is within the confidence interval limits (0.4706), we can say that 47.06% of the hotels give specific training inputs to the staff members regarding implementation of green practices.

Thus it can be said that 33% to 62% of the respondent hotels give specific training inputs to the staff members regarding implementation of green practices.

Table 4-20. Type of training given to the Staff

Sr. No	Type of Training	Frequency	Percentage
i.	Orientation Training	10	19.61
ii.	Online Training	3	5.88
iii.	Certification Training	5	9.80
iv.	Departmental Training	6	11.76



Explanation

From the table above it can be seen that 19.61% of the hotels give Orientation training to their staff members in green practices.

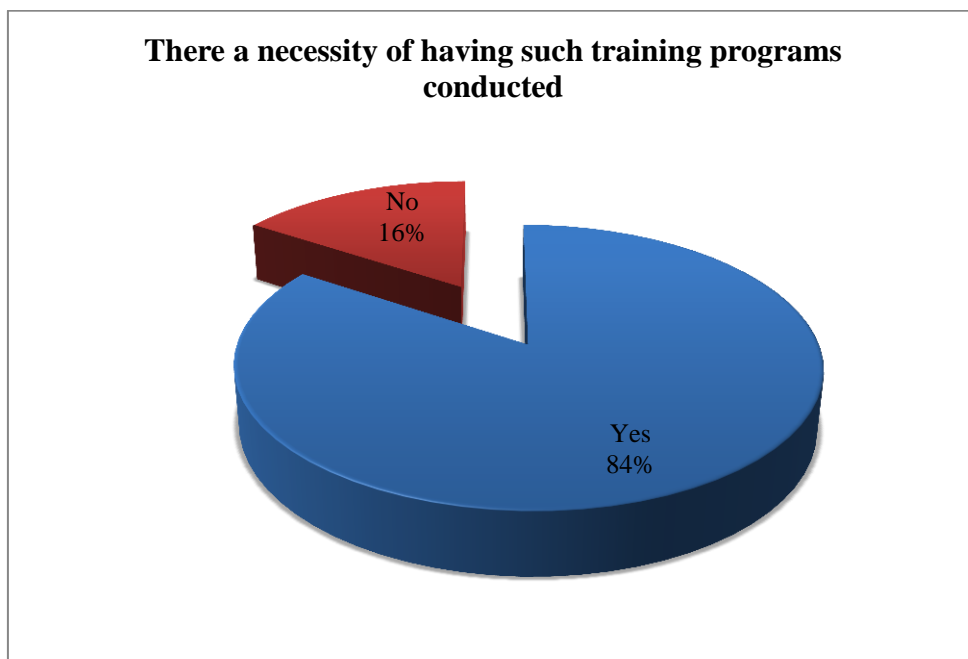
11.76% of the hotels give Online training to their staff members in green practices.

9.80% of the respondents said that they give Certification Training to their staff members in green practices.

5.88% of the respondents said that they give Departmental Training to their staff members in green practices.

Table 4-21.Necessity of training programmes for hotels

There a necessity of having such training programs conducted	Frequency	Percentage	95% CI
Yes	43	84.31	0.71-0.93
No	8	15.69	



Explanation

From the table given above, it can be seen that a considerable majority of the respondents (84.31%) feel that there is a necessity of having such training programmes conducted.

15.69% of the respondents feel that there is no necessity of having such training programmes conducted.

As the sample proportion value is within the confidence interval limits (0.8431), we can say that 71% to 93% of the hotels feel that there is a necessity of having such training programmes conducted.

TESTING OF HYPOTHESIS H_1

H_1 . “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”

3. The Null Hypothesis (H_{01c}) and Alternate (H_{11c}) Hypothesis were defined as under-

Table 4-22. Testing of Hypothesis H_{1c}

Hypothesis	P-Value	Decision
H_{01c} . Majority of the hotels and resorts do not feel the necessity of having training programs conducted for implementation of green practices Vs. H_{11c} . Majority of the hotels and resorts feel the necessity of having training programs conducted for implementation of green practices	0.000**	Reject H_{01c}

** : Highly Significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Is there a necessity of having such training programs conducted for implementation of green practices?

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-43

N-51

Sample p- 0.843153

95% Lower Bound- 0.714386

P-Value- 0.000

Source- Minitab Output

As p-value is very less i.e.0.000, lesser than 0.05, we reject H_{01c} and accept H_{11c} and conclude that majority of the hotels and resorts feel the necessity of having training programs conducted for implementation of green practices.

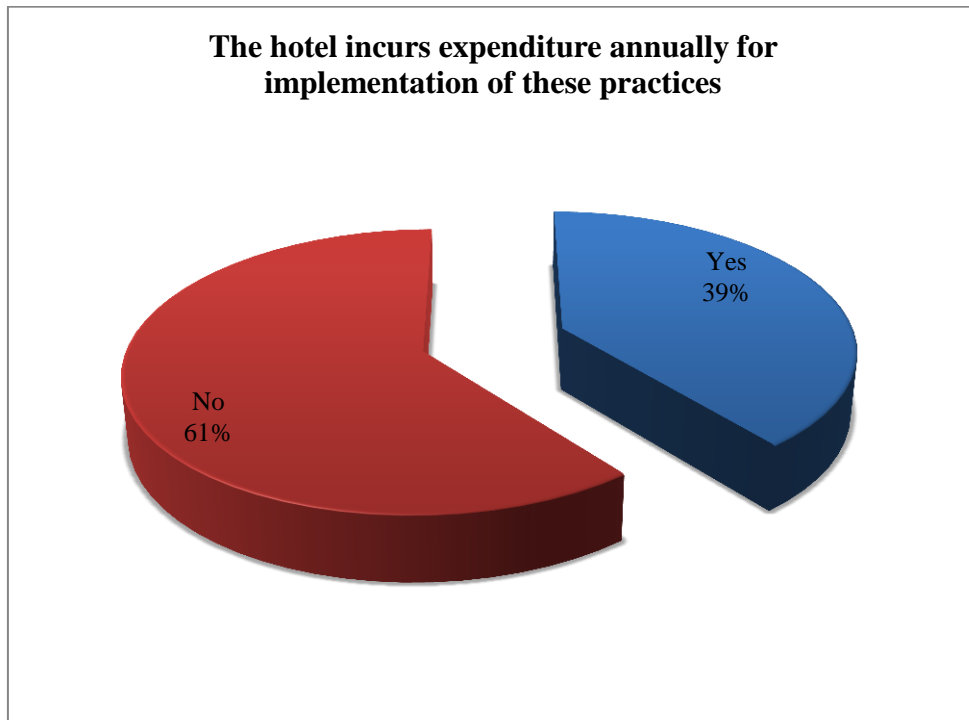
Conclusion

Rejection of Null hypothesis and acceptance of Alternative hypothesis indicates that majority of the hotels and resorts in Pune region follow eco-friendly practices in daily operations, have one or more individuals within the organization delegated with the responsibility of managing the environment-related issues and feel the necessity of having such training programs conducted for implementation of green practices.

So, we accept H_1 - “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”

Table 4-23. Expenditure incurred by hotel for green practice implementation

The hotel incur expenditure annually for implementation of these practices	Frequency	Percentage	95% CI
Yes	20	39.22	0.26-0.54
No	31	60.78	



Explanation

From the table above it can be seen that only 39.22% of the hotels incur expenditure annually for the implementation of green practices.

Most i.e. 60.78% of the hotels do not incur expenditure annually for the implementation of green practices.

As the sample proportion value is within the confidence interval limits (0.3922), we can say that 26% to 54% of the hotels incur expenditure annually for the implementation of green practices.

TESTING OF HYPOTHESIS H₃

H₃. “Implementing such practices in hotels involves substantial costs”.

For the purpose of testing this hypothesis, there were two ways in which this hypothesis was defined-

1. For the purpose of testing this hypothesis, the Null Hypothesis (H_{03a}) and Alternate Hypothesis (H_{13a}) were defined as under-

Table 4-24. Testing of Hypothesis H_{3a}

Hypothesis	P-Value	Decision
H _{03a} . Majority of the hotels do not incur expenditure annually for implementation of these practices Vs. H _{13a} . Majority of the hotels incur expenditure annually for implementation of these practices	0.953 ^{NS}	Accept H _{03a}

NS: Not Significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-20

N-51

Sample p- 0.392157

95% Lower Bound- 0.277164

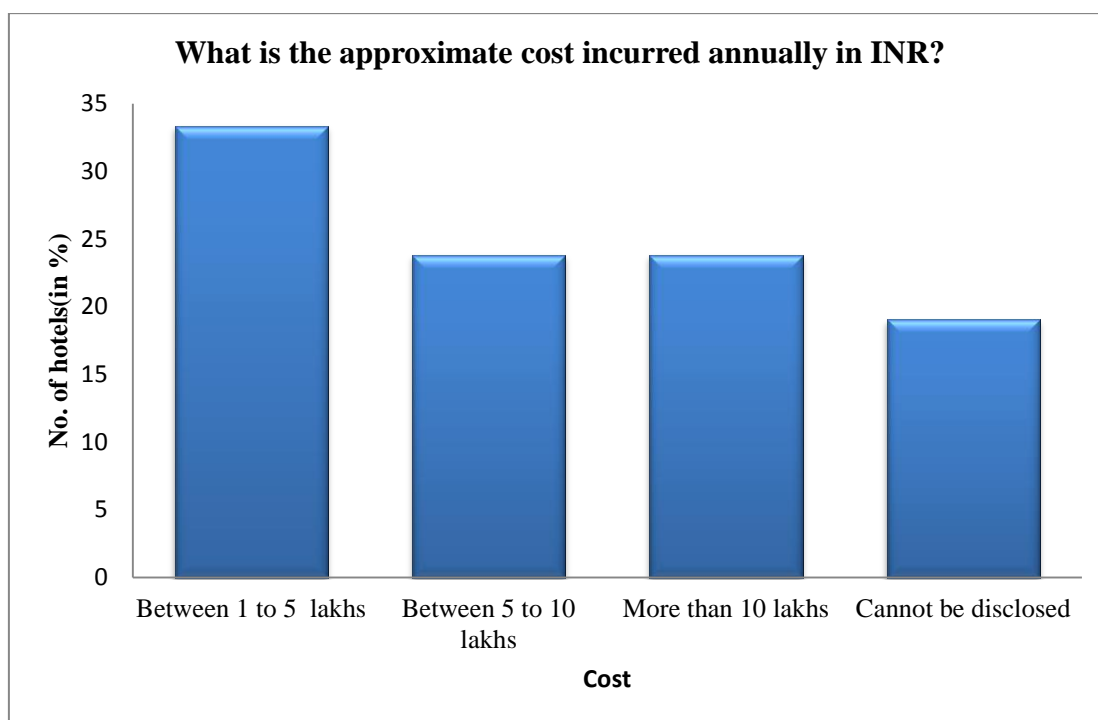
P-Value- 0.953

Source- Minitab Output

As p-value is 0.953, which is more than 0.05 we accept H_{03a} and conclude that majority of the hotels do not incur expenditure annually for implementation of these practices.

Table 4-25. Cost of Expenditure incurred in INR

Sr. No	Cost	Frequency	Percentage
i.	Between 1 to 5 lakhs	7	33.33
ii.	Between 5 to 10 lakhs	5	23.81
iii.	More than 10 lakhs	5	23.81
iv.	Cannot be disclosed	4	19.05



Explanation

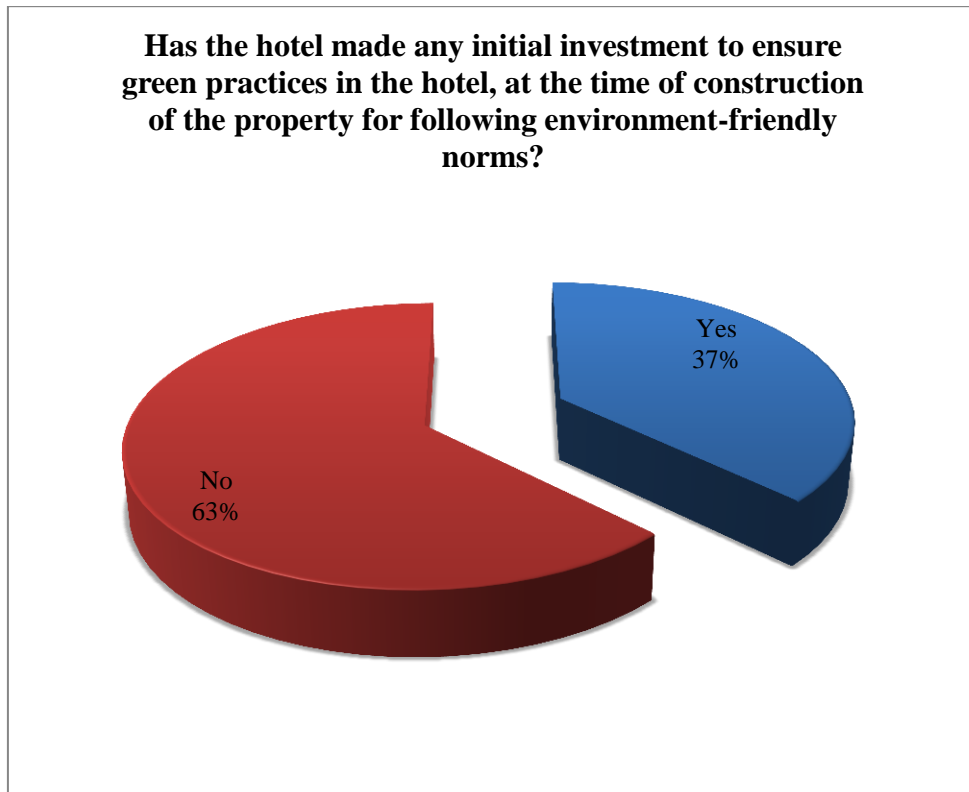
From the table above it can be seen that most of the respondents (33.33%) said that the hotel incurred expenditure between 1 lakh to 5 lakhs per annum for the implementation of green practices.

23.81% said that they incurred expenditure between 5 to 10 lakhs per annum, while 23.81% said that they annually incurred an expenditure of more than 10 lakhs per annum.

19.05% of the respondents refused to answer, saying that this amount cannot be disclosed.

Table 4-26. Initial investment by hotel to ensure green practice implementation in the hotel

	Frequency	Percentage	95% CI
Yes	19	37.25	0.24-0.52
No	32	62.75	



Explanation

From the table above it can be seen that less than half the respondents (37.25%) have made any initial investment to ensure green practices in the hotel, at the time of construction of the property for following environment-friendly norms.

More than half the respondents (62.75%) have not made any such investment.

As the sample proportion value is within the confidence interval limits (0.3725), we can say that 24% to 52% of the hotels have made any initial investment to ensure green practices in the hotel, at the time of construction of the property for following environment-friendly norms.

TESTING OF HYPOTHESIS H₃-

H₃. “Implementing such practices in hotels involves substantial costs”.

2. For the purpose of testing this hypothesis, the Null Hypothesis (H_{03b}) and Alternate Hypothesis (H_{13b}) were defined as under-

Table 4-27. Testing of Hypothesis H_{3b}

Hypothesis	P-Value	Decision
H _{03b} . Majority of the hotels have not made initial investment at the time of construction of the property for environment-friendly norms. Vs. H _{13b} . Majority of the hotels made initial investment at the time of construction of the property for environment-friendly norms.	0.976 ^{NS}	Accept H _{03b}

NS: Not Significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-19

N-51

Sample p- 0.372549

95% Lower Bound- 0.259502

P-Value- 0.976

Source-Minitab Output

As p-value is 0.976, which is greater than 0.05 we accept H_{03b} and conclude that majority of the hotels have not made initial investment at the time of construction of the property for environment-friendly norms

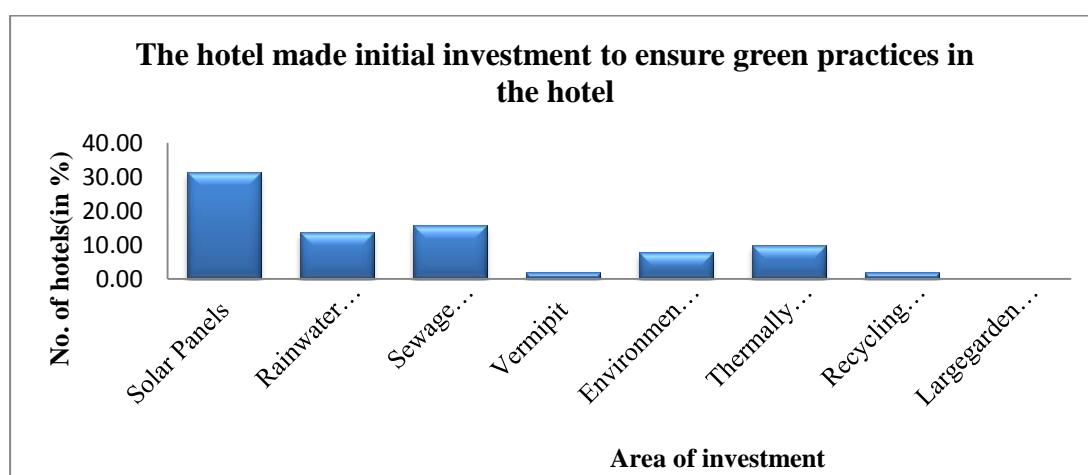
Conclusion

Acceptance of Null hypothesis and rejection of Alternate hypothesis indicates that majority of the respondents do not incur annual expenditure for the implementation of these practices and also have not made initial investment at the time of construction of the property for environment-friendly norms. This further indicates that majority of the hotels feel that implementing such practices in hotels does not involve substantial costs.

So, we reject H_3 - "Implementing such practices in hotels involves substantial costs".

Table 4-28. Area of investment

Sr. No	Area of investment	Frequency	Percentage
i.	Solar Panels	16	31.37
ii.	Rainwater harvesting	7	13.73
iii.	Sewage Treatment Plant	8	15.69
iv.	Vermipit	1	1.96
v.	Environment friendly building material	4	7.84
vi.	Thermally sealed double glazed windows	5	9.80
vii.	Recycling of Water arrangement	1	1.96
viii.	Large gardens and water bodies	0	0.00



Explanation

This was a multiple-choice question, where the respondents could select which ever options that were available.

From the table above it can be seen that 31.37% of the hotels have made an initial investment in Solar panels.

15.69% of the hotels have invested in Sewage Treatment Plants. 13.73% of the hotels have invested in Rainwater Harvesting.

9.80% of the hotels have invested in Thermally sealed double glazed windows.

7.84% of the hotels have invested in Environment friendly building material.

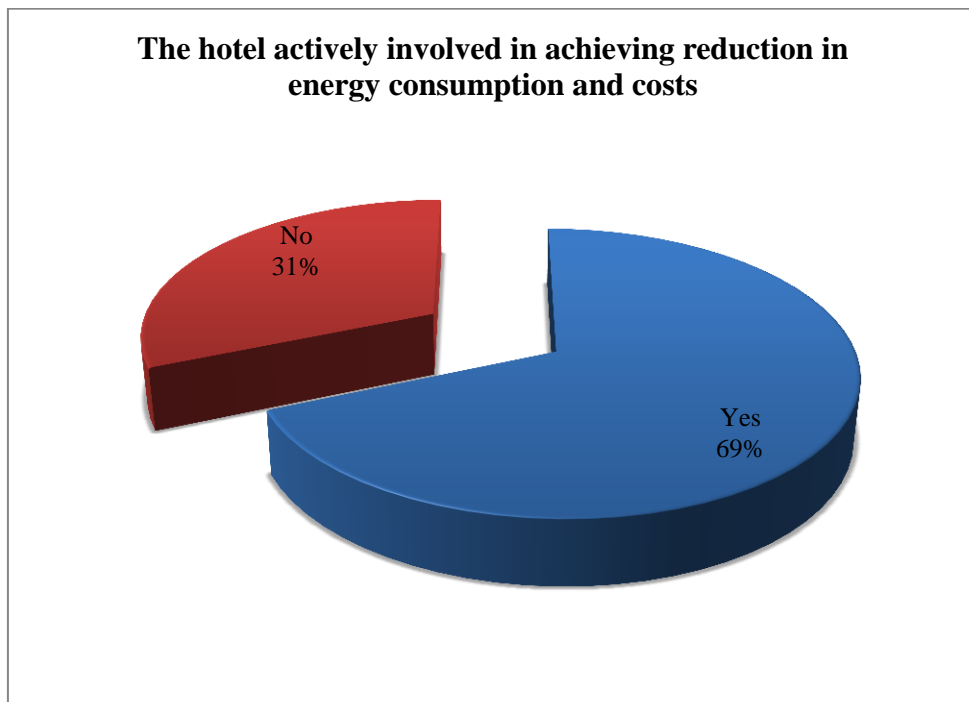
1.96% of the hotels have invested in Vermipits.

1.96% have invested in Recycling of water arrangement.

None have invested in Large gardens and water bodies initially.

Table 4-29. Hotel involvement in reduction of energy consumption and costs

Is the hotel actively involved in achieving reduction in energy consumption and costs	Frequency	Percentage	95% CI
Yes	35	68.63	0.54-0.81
No	16	31.37	



Explanation

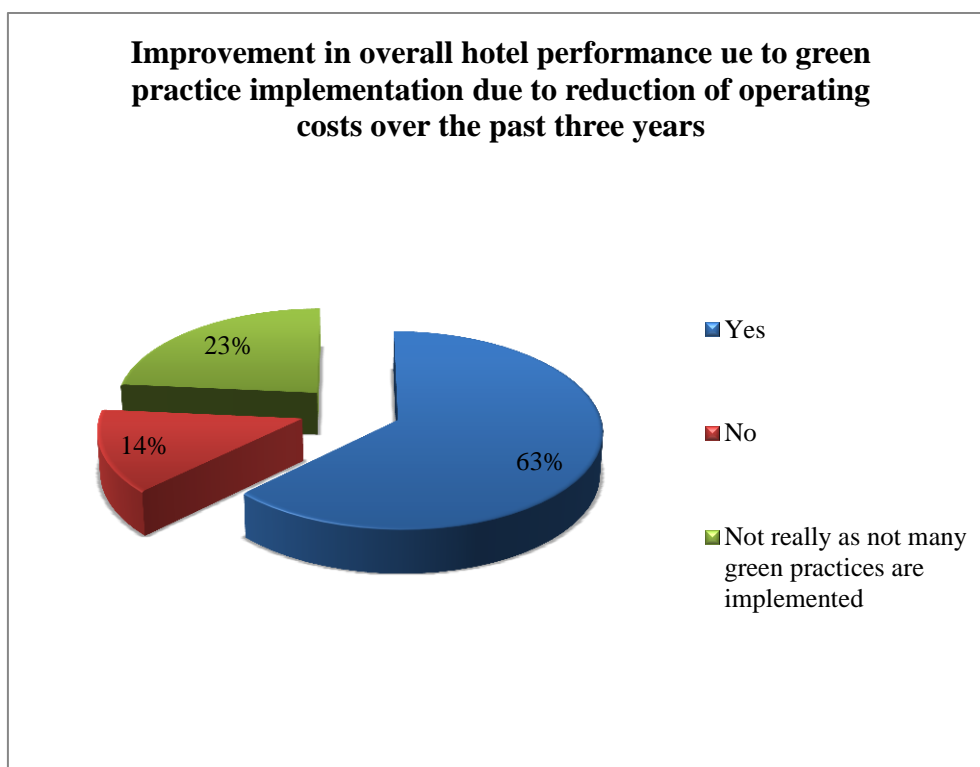
From the table above it can be seen that majority of the respondent hotels (68.63%) are involved in achieving reduction in energy consumption and costs.

Less than half the respondent hotels (31.37%) are not involved in achieving reduction in energy consumption and costs.

As the sample proportion value is within the confidence interval limits (0.6863) , we can say that 54% to 81% of the hotels are involved in achieving reduction in energy consumption and costs

Table 4-30. Improvement in overall hotel performance due to green practice implementation by reduction of operating costs over the past three years

Sr. No	Reduction of operating costs	Frequency	Percentage
i.	Yes	32	62.75
ii.	No	7	13.73
iii.	Not really as not many green practices are implemented	12	23.53



Explanation

From the table above it can be seen 62.75% of the respondent hotels have said that their overall performance has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past three years.

23.53% respondents have found not much improvement in overall performance due to implementation of green practices since not too many green practices are implemented.

13.73% of the respondents have found no improvement in overall performance due to implementation of green practices as no green practices are implemented.

TESTING OF HYPOTHESIS H₂

H₂. “The overall performance of the hotels has been positively affected after implementing these practices.”

For the purpose of testing this hypothesis, the Null Hypothesis (H₀₂) and Alternate Hypothesis (H₁₂) were defined as under-

Table 4-31. Testing of Hypothesis H₂

Hypothesis	P-Value	Decision
<p>H₀₂. Majority of the respondents think that the overall performance of the hotels has not been positively affected after implementing these practices.</p> <p style="text-align: center;">Vs.</p> <p>H₁₂. Majority of the respondents think that the overall performance of the hotels has been positively affected after implementing these practices</p>	0.046*	Reject H ₀₂

NS: Not Significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-32

N-51

Sample p- 0.627451

95% Lower Bound- 0.502837

P-Value- 0.046

Source- Minitab Output

As p-value is 0.046, which is less than 0.05 we reject H_{02} and conclude that majority of the respondents think that the overall performance of the hotels has been positively affected after implementing these practices.

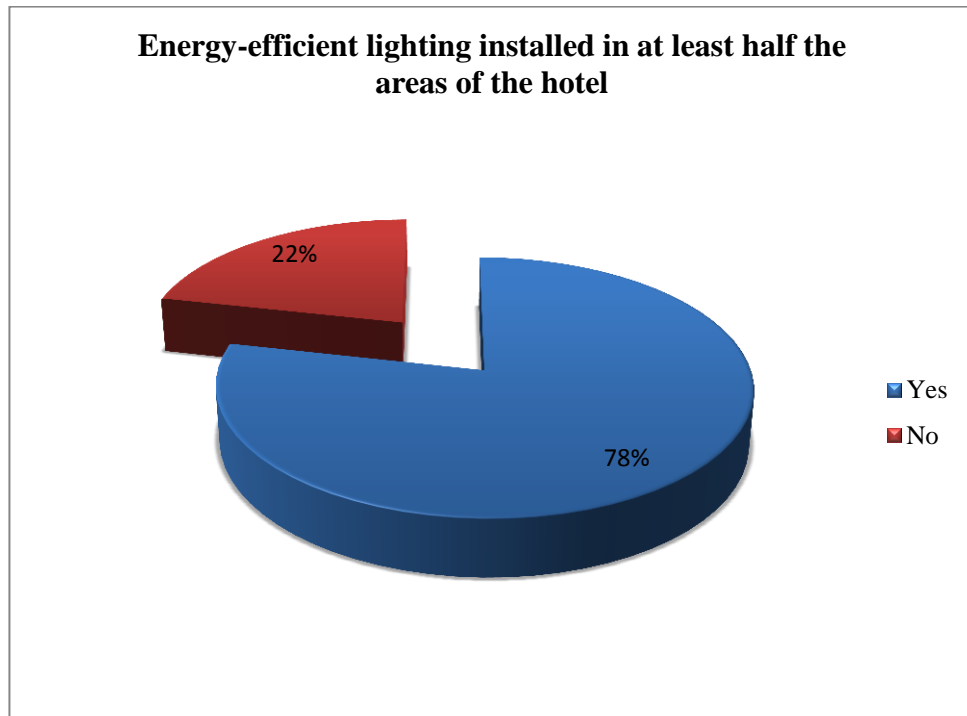
Conclusion

Rejection of Null hypothesis and acceptance of alternate hypothesis indicates that majority of the respondents think that the overall performance of the hotels has been positively affected after implementing these practices.

So, we accept H_2 - “The overall performance of the hotels has been positively affected after implementing these practices.”

Table 4-32. Installation of energy-efficient lighting in at least half the hotel areas

Is Energy-efficient lighting installed in at least half the areas of the hotel	Frequency	Percentage	95% CI
Yes	40	78.43	0.47-0.89
No	11	21.57	



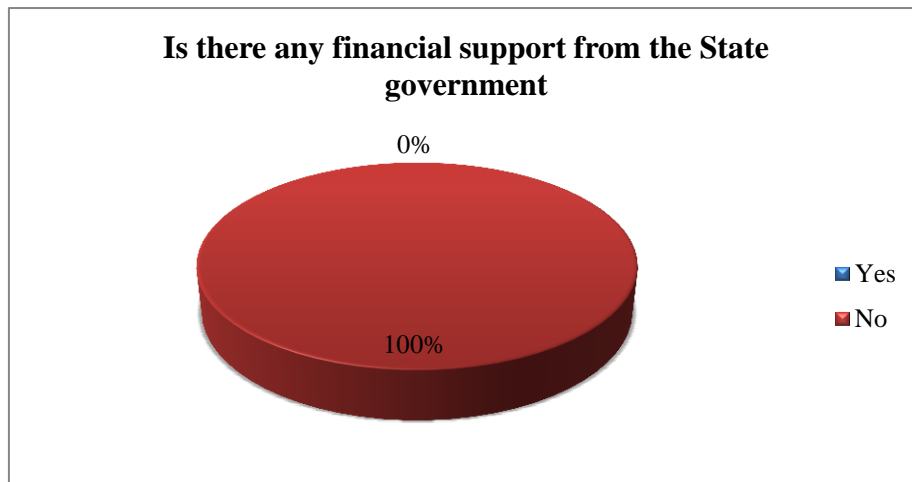
Explanation

From the table above it can be seen that majority of the respondent hotels (78.43%) have energy-efficient lighting installed in at least half the areas of the hotel. Less than a quarter of the respondent hotels (21.57%) do not have energy-efficient lighting installed in at least half the areas of the hotel

As the sample proportion value is within the confidence interval limits (0.7843), we can say that 47% to 89% of the hotels have energy-efficient lighting installed in at least half the areas of the hotel.

Table 4-33. Financial support from State Government for implementation of green practices

Is there any financial support from the State government	Frequency	Percentage
Yes	0	0.00
No	51	100



Explanation

From the table above it is seen that all respondents have unanimously said that there is no financial support from the State government for the implementation of green practices.

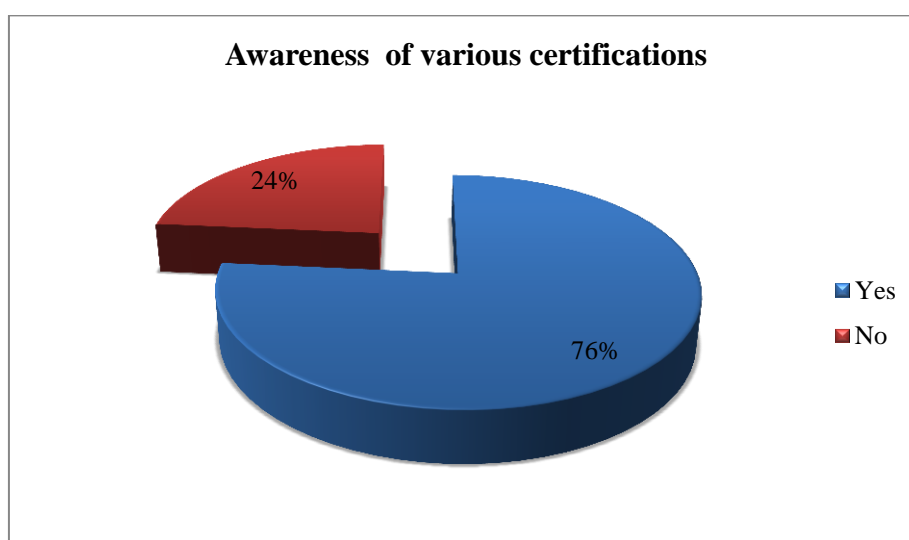
4.3.5. SECTION III-

GREEN CERTIFICATION AWARENESS

This section presents the awareness that the respondent hotels have about the Green certifications available and if the hotels have got themselves certified under them. The data is presented in the form of tables and their corresponding graphs.

Table 4-34. Awareness of Various eco-friendly hotel certifications

Aware of various certifications	Frequency	Percentage	95% CI
Yes	39	76.47	0.63-0.87
No	12	23.53	



Explanation

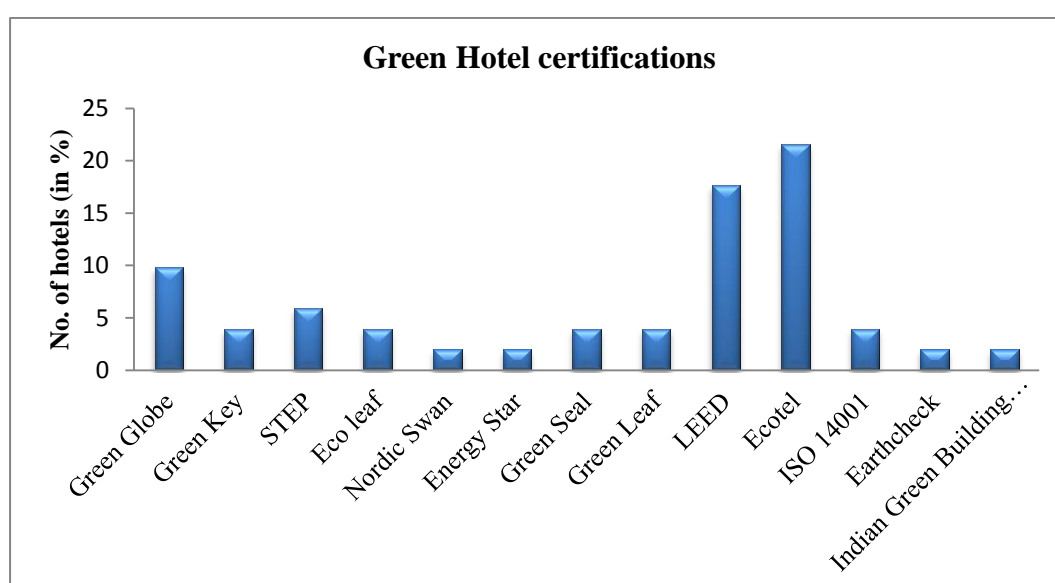
From the table above it can be seen that majority of the respondent hotels (76.47%) are aware of various certifications that are available globally as well as in India for hotels conforming to eco-friendly norms.

Less than a quarter of the respondent hotels (23.53%) are not aware of these certifications.

As the sample proportion value is within the confidence interval limits (0.7647), we can say that 63% to 87% of the hotels are aware of various certifications that are available globally as well as in India for hotels conforming to eco-friendly norms.

Table 4-35. Awareness of Green Hotel certifications

Answer given by respondent	Frequency	Percentage
Green Globe	5	9.80
Green Key	2	3.92
STEP	3	5.88
Eco leaf	2	3.92
Nordic Swan	1	1.96
Energy Star	1	1.96
Green Seal	2	3.92
Green Leaf	2	3.92
LEED	9	17.65
Ecotel	11	21.57
ISO 14001	2	3.92
Earth check	1	1.96
Indian Green Building Council	1	1.96



Explanation

From the table above it can be seen that a large number of the respondent hotels- 21.57% are aware of Ecotel certification.

17.65% of the respondents are aware of LEEDS certification.

9.80% of the hotels are aware of Green Globe certification.

5.88% of the hotels are aware of STEP certification.

3.92% are aware of Green Key certification.

3.92% of the hotels are aware of ISO1400 certification.

3.92% of the hotels are aware of Eco-Leaf certification.

3.92% of the hotels are aware of Green Seal certification.

3.92 % of the hotels are aware of Green Leaf certification.

1.96% of the hotels are aware of Earthcheck certification.

1.96% of the hotels are aware of Indian Green Building Council certification.

1.96% of the hotels are aware of Nordic Swan certification.

1.96% of the hotels are aware of Energy Star certification.

3.92% of the hotels are aware of Green Seal certification.

3.92 % of the hotels are aware of Green Leaf certification.

Table 4-36. Whether the hotel is certified under any green certifications?

Is the hotel certified under any of these?	Frequency	Percentage	95% CI
Yes	8	15.69	0.07-0.29
No	43	84.31	



Explanation

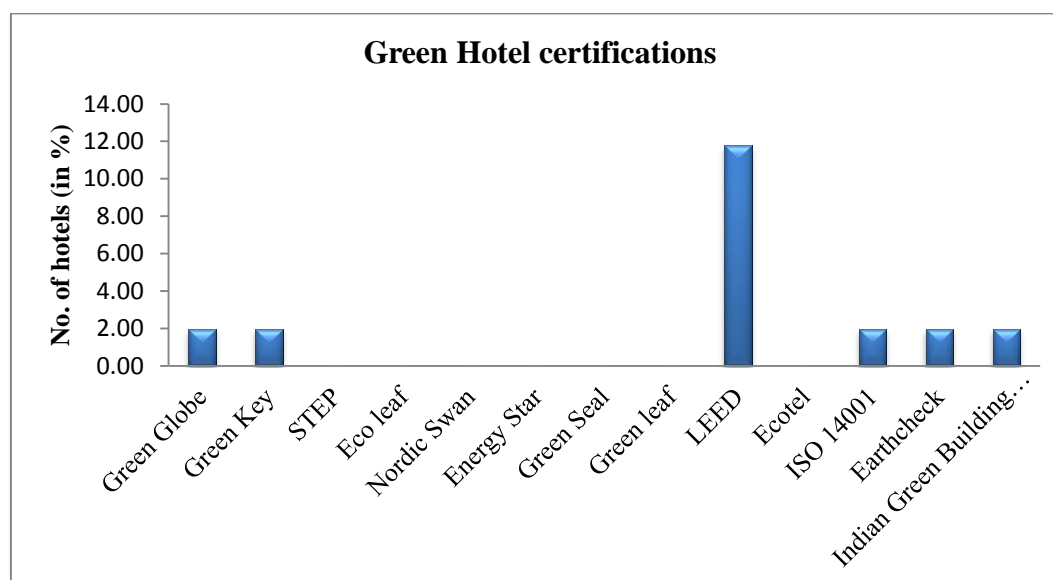
From the table above it can be seen that very few hotels -15.69% of the hotels have opted for green certifications.

84.31% of the responding hotels have not opted for any kind of green certification.

As the sample proportion value is within the confidence interval limits (0.1569), we can say that 7% to 29% of the hotels have opted for green certifications.

Table 4-37. Details of Green certification chosen by the hotel

Answer given by respondent	Frequency	Percentage
Green Globe	1	1.96
Green Key	1	1.96
STEP	0	0.00
Eco leaf	0	0.00
Nordic Swan	0	0.00
Energy Star	0	0.00
Green Seal	0	0.00
Green Leaf	0	0.00
LEED	6	11.76
Ecotel	0	0.00
ISO 14001	1	1.96
Earthcheck	1	1.96
Indian Green Building Council	1	1.96



Explanation:

From the table above it can be seen that 11.76% of the respondents have opted for LEEDS certification.

1.96% of the hotels have opted for Green Globe certification, while 1.96% have opted for Green Key certification.

1.96% of the hotels have opted for ISO14001, 1.96% of the hotels have opted for Earthcheck, while 1.96% of the hotels have opted for Indian Green Building Council.

None of the respondents have opted for STEP, Eco-Leaf, Nordic Swan, Energy Star, Green Seal, Green Leaf and Ecotel certifications.

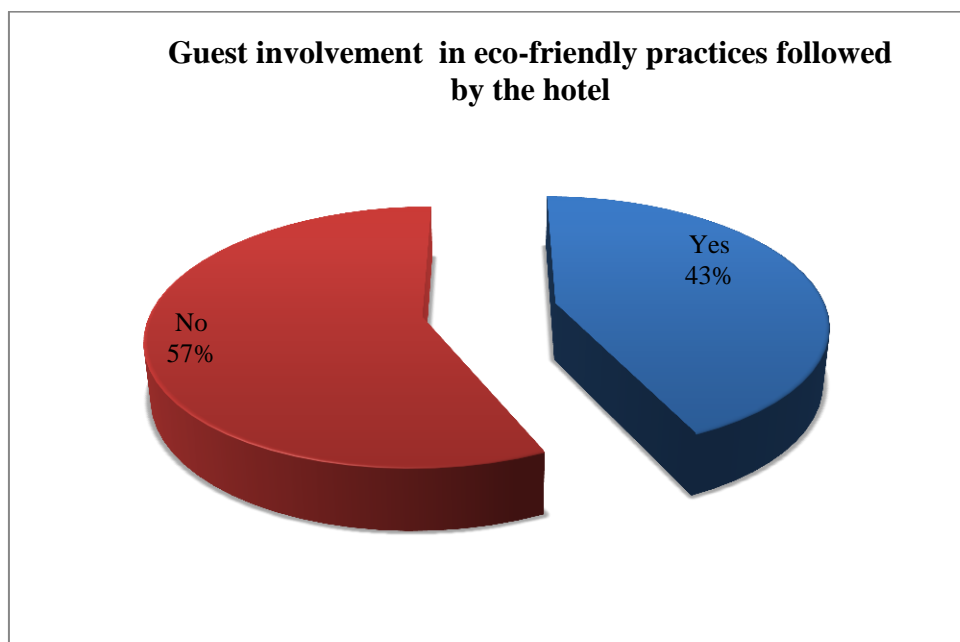
4.3.6. SECTION IV

HOTEL'S EXPERIENCES OF GUEST INVOLVEMENT IN GREEN PRACTICES

This section presents the hotel's experiences of guest involvement in green practices. This data is presented in the form of tables and their corresponding graphs.

Table 4-38. Guest Involvement in eco-friendly practices followed by the hotel

	Frequency	Percentage	95% CI
Yes	22	43.14	0.29-0.58
No	29	56.86	



Explanation

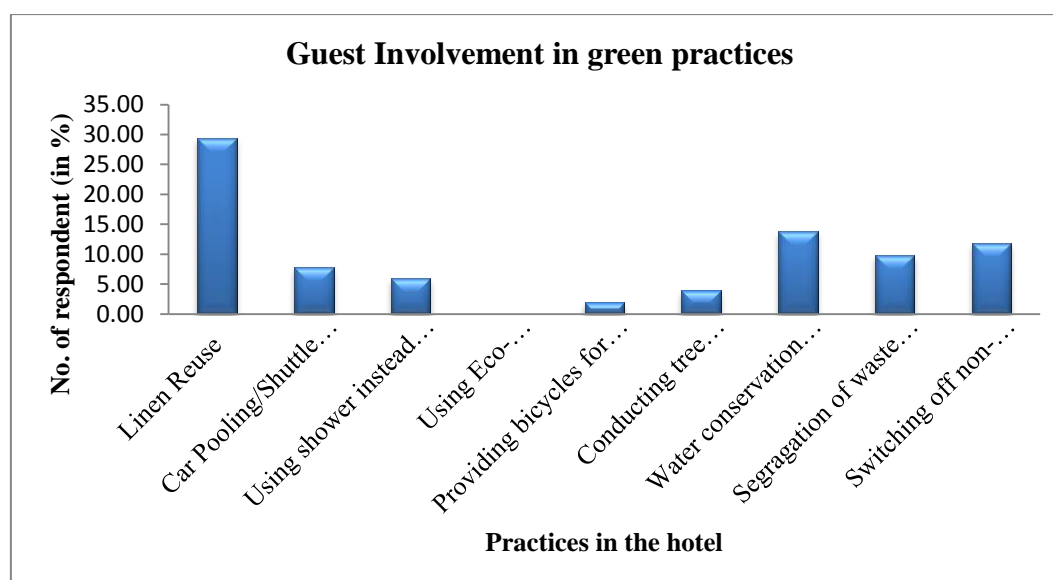
From the table above we can see that majority of the hotels (56.86%) do not have guest involvement in green practices.

Only 43.14 % of the respondents said that they have guest involvement.

As the sample proportion value is within the confidence interval limits (0.4314), we can say that 29% to 58% of the hotels do not involve guests in implementation of green initiatives.

Table 4-39. Guest involvement in specific eco-friendly practices

Sr. No	Guest Involvement	Frequency	Percentage
i.	Linen Reuse	15	29.41
ii.	Car Pooling/Shuttle service	4	7.84
iii.	Using shower instead of bath tub	3	5.88
iv.	Using Eco-button(Reducing Air conditioning temperature)	0	0.00
v.	Providing bicycles for local use	1	1.96
vi.	Conducting tree plantation drives	2	3.92
vii.	Water conservation programmes	7	13.73
viii.	Segregation of waste generated in the guestroom	5	9.80
ix.	Switching off non-required lights in the guestrooms	6	11.76



Explanation

From the above table it is seen that hotels who have involved guests in implementation of green practices in the hotel have shown their maximum involvement in the Linen reuse programme-29.41%, followed by Water conservation programmes-13.73%, and then Switching off non-required lights in the guestrooms-11.76%.

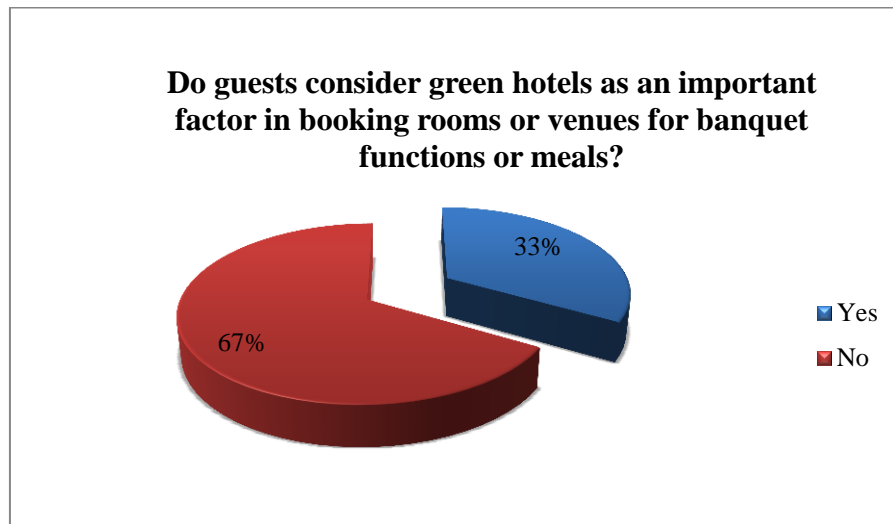
9.80% have involved guests in Segregation of waste generated in the guestroom, 7.84% in Car Pooling/Shuttle service, while 5.88% have involved guests in Using shower instead of bath tub.

3.92% of the hotels have involved Guests in Tree plantation drives, while 1.96% have provided bicycles to guests for local use.

None of the responding hotels (0%) have provided the facility of Using Eco-button (Reducing Air conditioning temperature) to the guests in order to involve them in green practices.

Table 4-40. Importance given by guests to green hotels while making bookings

Do guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals?	Frequency	Percentage	95% CI
Yes	17	33.33	0.21-0.48
No	34	66.67	



Explanation

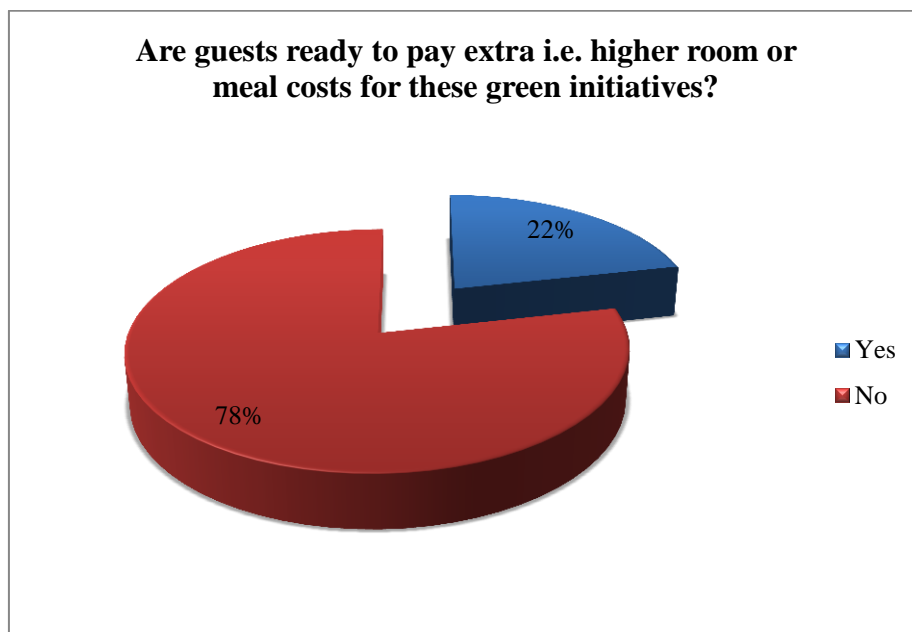
From the table above, it is seen that only one-third of the responding hotels (33.33%) said that guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals.

The majority of the respondents (66.67%) said that guests did not consider green hotels as an important factor in booking rooms or venues for banquet functions or meals.

As the sample proportion value is within the confidence interval limits (0.3333), we can say that 21% to 48% of the hotels said that guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals.

Table 4.41. Willingness of guests to pay extra for green initiatives carried out by the hotel

Are guests ready to pay extra i.e. higher room or meal costs for these green initiatives?	Frequency	Percentage	95% CI
Yes	11	21.57	0.11-0.35
No	40	78.43	



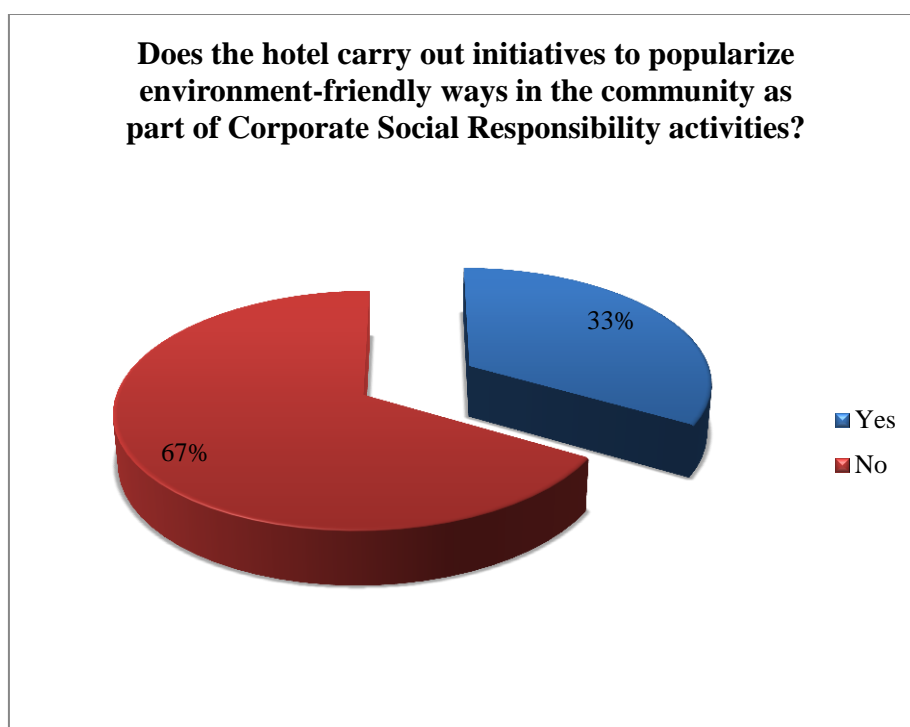
Explanation

From the table above, it can be seen that only 21.57% of the responding hotels feel that guests are ready to pay extra i.e. higher room or meal costs for green initiatives. Majority of the respondents i.e. 78.43% feel that guests are not ready to pay extra i.e. higher room or meal costs for green initiatives.

As the sample proportion value is within the confidence interval limits (0.2157), we can say that 11% to 35% of the hotels feel that guests are ready to pay extra i.e. higher room or meal costs for green initiatives.

Table 4-42. Does hotel popularize environment-friendly ways in the community

Does the hotel carry out initiatives to popularize environment-friendly ways in the community as part of Corporate Social Responsibility activities?	Frequency	Percentage	95% CI
Yes	17	33.33	0.21-0.48
No	34	66.67	



Explanation

From the table above, it can be seen that only 33.33% of the responding hotels carry out initiatives to popularize environment-friendly ways in the community as part of Corporate Social Responsibility activities.

Majority of the respondents i.e. 66.67 % of the responding hotels do not carry out initiatives to popularize environment-friendly ways in the community as part of Corporate Social Responsibility activities.

As the sample proportion value is within the confidence interval limits (0.3333), we can say that 21% to 48% of the hotels carry out initiatives to popularize environment-friendly ways in the community as part of Corporate Social Responsibility activities.

4.3.7 SECTION V-

ASSOCIATION OF VARIABLES

This section presents the association of variables. This data is presented in the form of tables and their corresponding graphs.

4.3.7.1. ASSOCIATION BETWEEN IF HOTEL IS PART OF A CHAIN AND OTHER VARIABLES

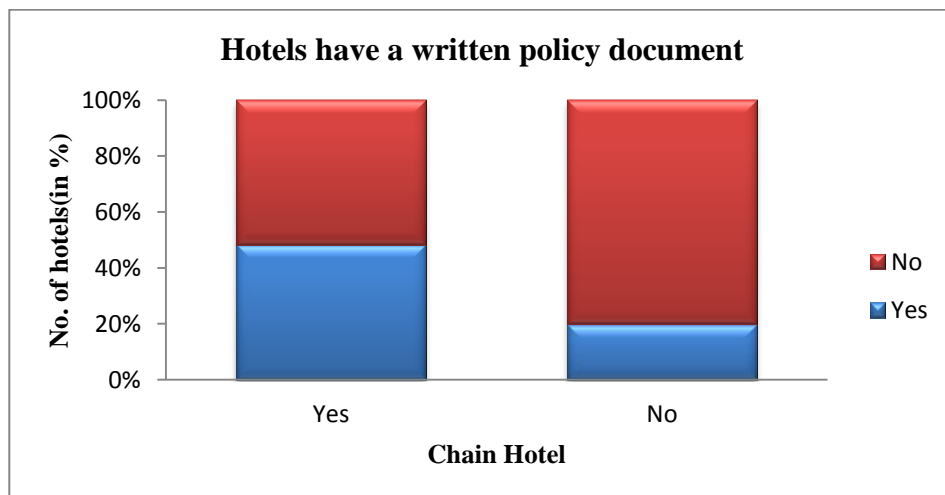
Table 4-43.

To test the association between whether the hotel is a part of any chain and if the hotel has a written policy document, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Chain Hotel	Hotels have a written policy document				p-value
	Yes	Yes (in %)	No	No (in %)	
Yes	15	48.39	16	51.61	0.041*
No	4	20.00	16	80.00	

Chi-square test for independence of attributes, *: Significant association



Explanation

There is a relation between whether the hotel is a part of any chain and if the hotel has a written policy document on green practices, (as $p\text{-value} < 0.05$).

Although less than half the chain hotels have a written policy document, the number is noticeably more than the independent hotels. More of the chain hotels (48.39%) have a written policy document as compared to the independent hotels (20%).

51.61% of the chain hotels do not have a written policy document on green practices, while 80% of the independent ones do not have it.

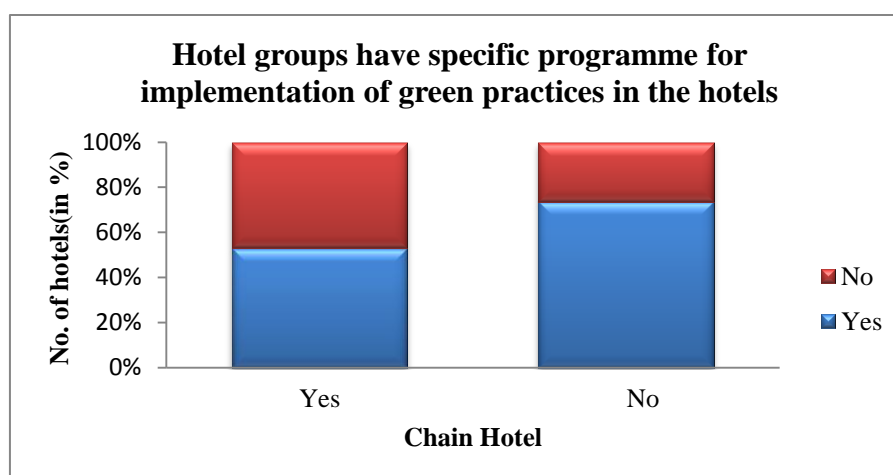
So it can be said that having a written policy document is dependent on whether the hotel is a part of any chain, since chain hotels tend to have more systems in place, as policies and procedures need to be uniform across all the properties belonging to that particular chain.

Table 4-44.

To test the association between whether the hotel is a part of any chain and if the hotel has a specific programme for implementation of green practices, we used Chi-square test for independence of attributes.

Chain Hotel	Hotel has specific programme for implementation of green practices in the hotels				p-value
	Yes	Yes (in %)	No	No (in %)	
Yes	17	54.84	14	45.16	0.036*
No	15	75.00	5	25.00	

Chi-square test for independence of attributes, *: Significant association



Explanation

There is a relation between whether the hotel is a part of any chain and if the hotel groups have specific programme for implementation of green practices in the hotels, (as p-value < 0.05).

After analysis and interpretation of data, it is seen that 54.84% of chain hotels have specific programmes for implementation of green practices in the hotels, while 75% of the independent hotels have specific programmes for implementation of green practices in the hotels.

45.16% of chain hotels do not have specific programmes for implementation of green practices in the hotels, while 25% of the independent hotels do not have specific programmes for implementation of green practices in the hotels.

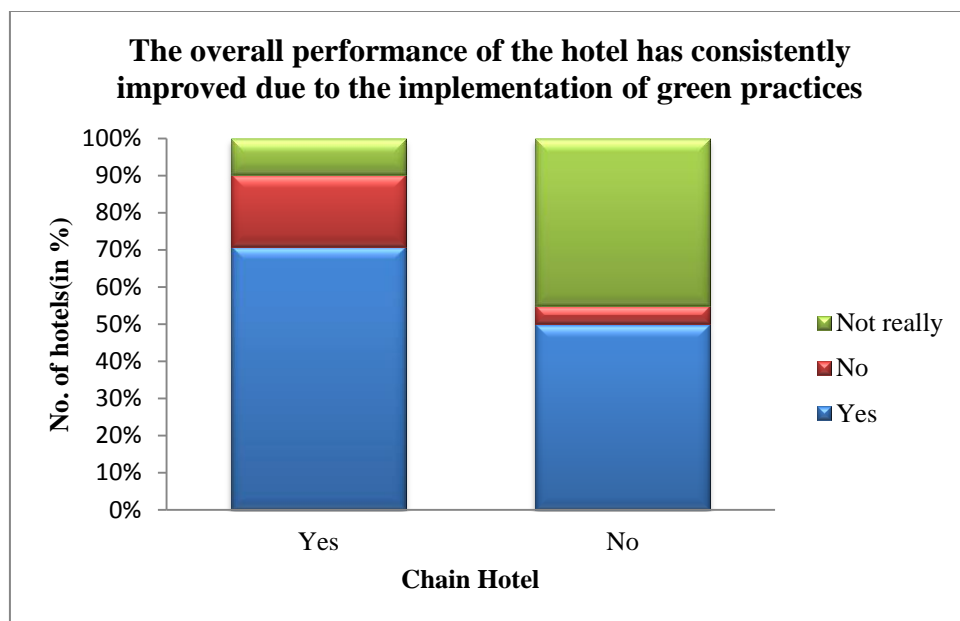
So, it can be said that there is a relation between whether the hotel is a part of any chain and if the hotel groups have specific programme for implementation of green practices in the hotels, independent hotels have more specific programmes as compared to chain hotels.

Table 4-45.

To test the association between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices, we used Chi-square test for independence of attributes.

Chain Hotel	The overall performance of the hotel has consistently improved due to the implementation of green practices						p-value
	Yes	Yes (in %)	No	No (in %)	Not really	Not really (in %)	
Yes	22	70.97	6	19.35	3	9.68	0.010**
No	10	50.00	1	5.00	9	45.00	

Chi-square test for independence of attributes, **Highly: Significant association



Explanation

There is a relation between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices (as p-value < 0.05).

After analysis and interpretation of data, it is seen that 70.97% of the chain hotels have said that the overall performance of the hotel has consistently improved due to

the implementation of green practices, 19.35% have said no, while 9.68% have responded as not really.

50% of the independent hotels have said that the overall performance of the hotel has consistently improved due to the implementation of green practices, 5% have said no, while 45% have responded as not really.

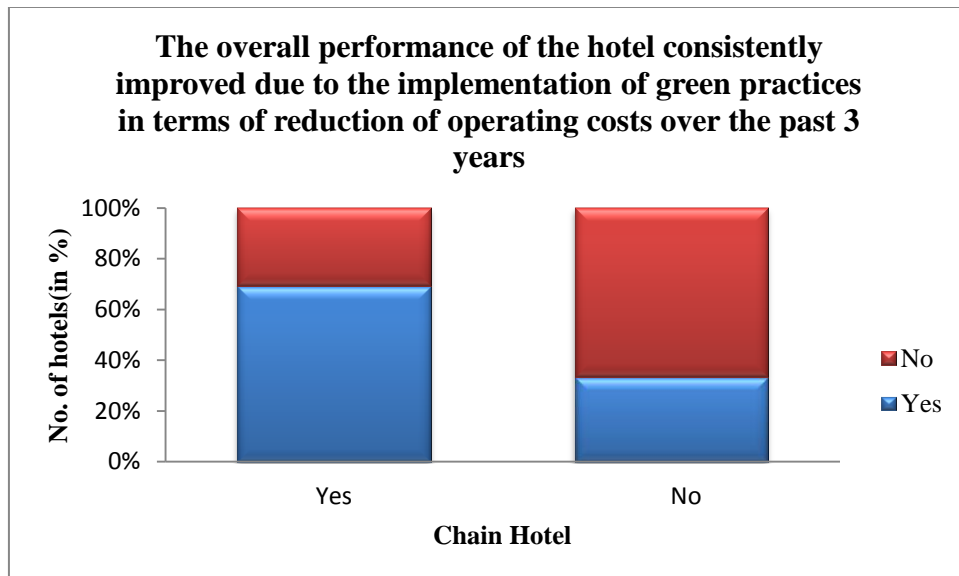
So, it can be said that there is a relation between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices, as more chain hotels say that there said that the overall performance of the hotel has consistently improved due to the implementation of green practices as compared to independent ones.

Table 4-46.

To test the association between whether the hotel is a part of any chain and if The overall performance of the hotel has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past 3 years, we used Chi-square test for independence of attributes.

Chain Hotel	The overall performance of the hotel has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past 3 years				p-value
	Yes	Yes (in %)	No	No (in %)	
Yes	27	87.10	4	12.90	0.026*
No	12	60.00	8	40.00	

Chi-square test for independence of attributes, *: Significant association



Explanation

There is a relation between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past 3 years (as p-value < 0.05).

After analysis and interpretation of data, it can be seen that 87.10% of the chain hotels said that there is an improvement, while 12.90% said that there is no improvement in overall performance.

60% of the independent hotels said that said that there is an improvement in the overall performance, while 40% said that there is no improvement in overall performance.

So, it can be said that there is a relation between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past 3 years. More of the chain hotels show improvement as compared to the independent hotels.

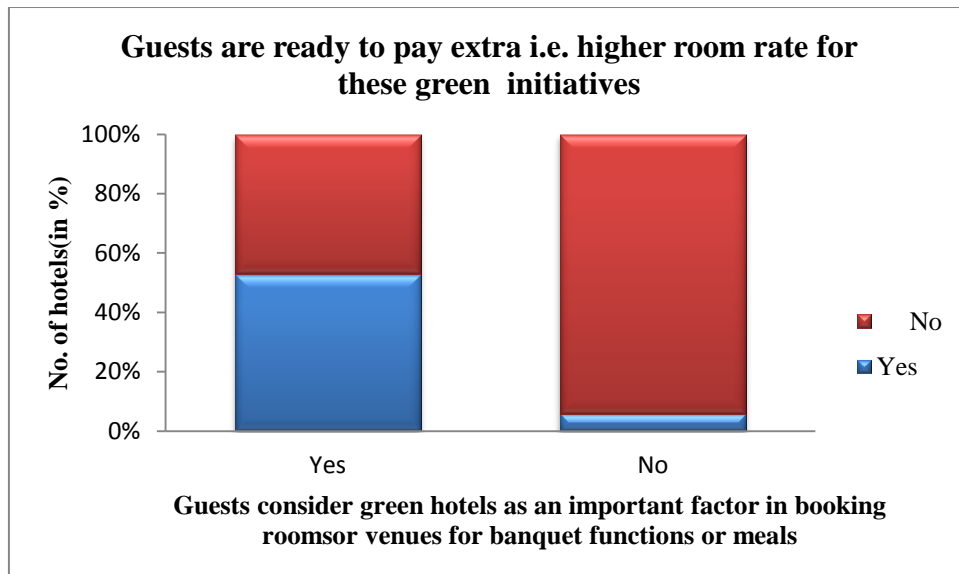
4.3.7.2. ASSOCIATION BETWEEN WHETHER GUESTS CONSIDER GREEN FACTOR IMPORTANT WHILE MAKING BOOKINGS AND IF THEY ARE READY TO PAY EXTRA

Table 4-47.

To test the association between whether guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals and Guests are ready to pay extra i.e. higher room rate for these green initiatives, we used Chi-square test for independence of attributes.

Guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals	Guests are ready to pay extra i.e. higher room rate for these green initiatives				p-value
	Yes	Yes (in %)	No	No (in %)	
Yes	9	52.94	8	47.06	0.036*
No	2	5.88	32	94.12	

Chi-square test for independence of attributes, *: Significant association



Explanation

There is a relation between whether guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals and guests are ready to pay extra i.e. higher room rate for these green initiatives (as p-value < 0.05).

After analysis and interpretation of data, it is seen that 52.94% of the guests who consider green hotels as an important factor in booking rooms or venues for banquet functions or meals are ready to pay extra for these initiatives, while 47.06% are not ready to pay extra.

5.88% of the guests who do not consider green hotels as an important factor in booking rooms or venues for banquet functions are, ready to pay extra while 94.12% are not ready to pay extra.

So, it can be said that only those guests who consider green hotels as an important factor in booking rooms or venues for banquet functions or meals are ready to pay extra for these green initiatives.

Guests who do not consider green hotels as an important factor in booking rooms or venues for banquet functions or meals are not ready to pay extra for these green initiatives.

4.3.7.3. ASSOCIATION BETWEEN YEAR OF COMMENCEMENT OF OPERATIONS AND OTHER VARIABLES

Table 4-48.

To test the association between year of commencement of operations and awareness about eco-friendly practices carried out in the hospitality industry, we used Chi-square test for independence of attributes.

Year of commencement of operations	Awareness about eco-friendly practices carried out in the hospitality industry				p-value
	Yes	Yes (in %)	No	No (in %)	
Before 2000	33	83.33	3	16.67	0.016*
After 2000	15	100.00	0	0	

Chi-square test for independence of attributes, *: Significant association



Explanation

There is a relation between Year of commencement of operations and awareness about eco-friendly practices carried out in the hospitality industry (as p-value < 0.05).

After analysis and interpretation of data, is seen that 83.33% of the hotels that commenced operations before the year 2000 are aware about eco-friendly practices carried out in the hospitality industry, while 16.67% are not aware.

On the other hand 100% of the hotels that commenced operations before the year 2000 are aware about eco-friendly practices carried out in the hospitality industry.

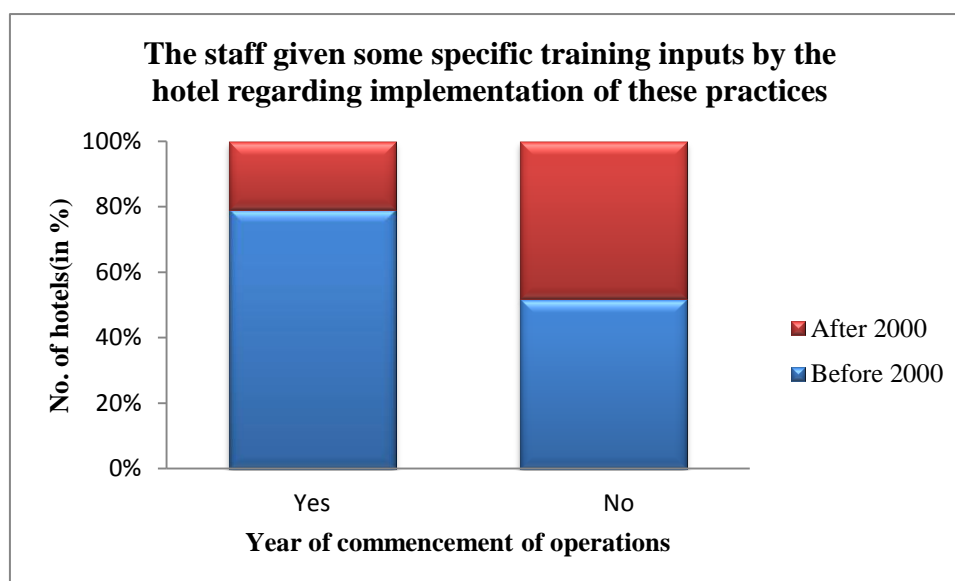
So it can be said that hotels that commenced operations after the year 2000, are more aware of eco-friendly practices in the hospitality industry, as compared to those that commenced operations before the year 2000, are more aware of eco-friendly practices in the hospitality industry.

Table 4-49.

To test the association between year of commencement of operations and whether the staff given some specific training inputs by the hotel regarding implementation of these practices, we used Chi-square test for independence of attributes.

Year of commencement of operation	The staff given some specific training inputs by the hotel regarding implementation of these practices				p-value
	Yes	Yes (in %)	No	No (in %)	
Before 2000	19	57.58	14	42.42	0.042*
After 2000	5	27.78	13	72.22	

Chi-square test for independence of attributes, *: Significant association



Explanation

Whether the staff is given some specific training inputs by the hotel regarding implementation of these practices is related to year of commencement of operations of the hotel (as p-value < 0.05).

After analysis and interpretation of data it is seen that 57.58% of the hotels which commenced operations before the year 2000 give specific training inputs to their staff regarding implementation of green practices, 42.42% do not give any specific training inputs.

On the other hand 27.78% of the hotels which commenced operations after the year 2000 give specific training inputs to their staff regarding implementation of green practices, 72.22% do not give any specific training inputs.

So, it can be said that whether the staff is given some specific training inputs by the hotel regarding implementation of these practices is related to year of commencement of operations of the hotel, more hotels to the year which started operations prior to the year 2000 give specific training inputs to their staff regarding implementation of green practices, as compared to the hotels which commenced operation after the year 2000.

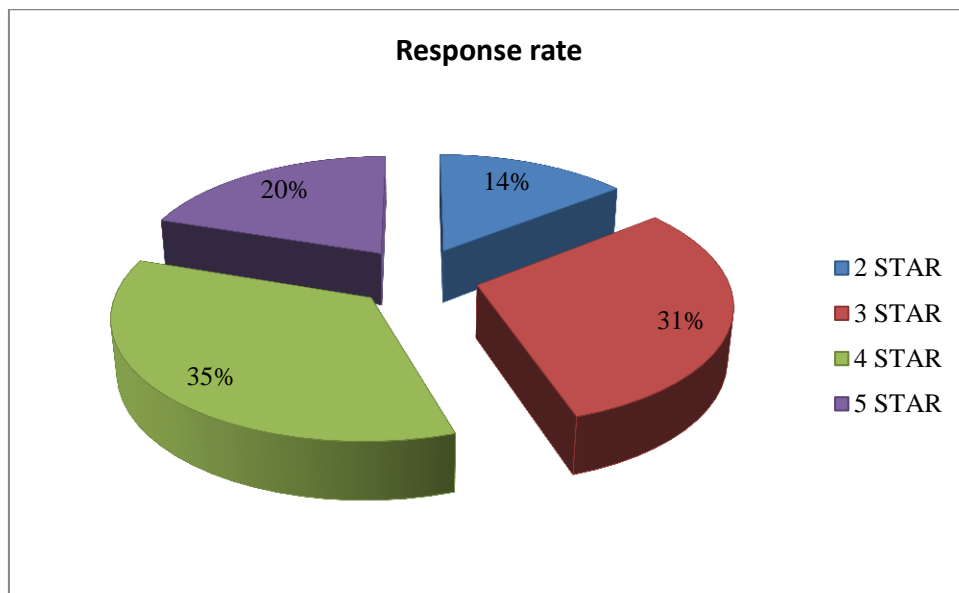
4.4. GUEST QUESTIONNAIRES

4.4.1. RESPONSE RATE

Out of the 500 questionnaires that were administered to the guests, four hundred and two (402) constituting 80.4% Response rate were collected. It was decided to approach ten guests who had experienced food, accommodation, meetings, banquet functions etc. at the 51 hotels surveyed for green practices. The analysis of opinions of these guests would be essential in testing of a few hypothesis.

Table 4-50. Response rate

Type of hotel	Frequency	Percentage
2 STAR	58	14.43
3 STAR	123	30.60
4 STAR	141	35.07
5 STAR	80	19.90



4.4.2. ORGANIZATION OF FINDINGS

The study findings were grouped, analyzed and presented under following headings:

Section I:

This section deals with the demographic characteristics of the respondents.

Section II:

This section mainly focuses on the awareness and experiences of respondents with green practices

Section III:

This section focuses on association with demographic variables

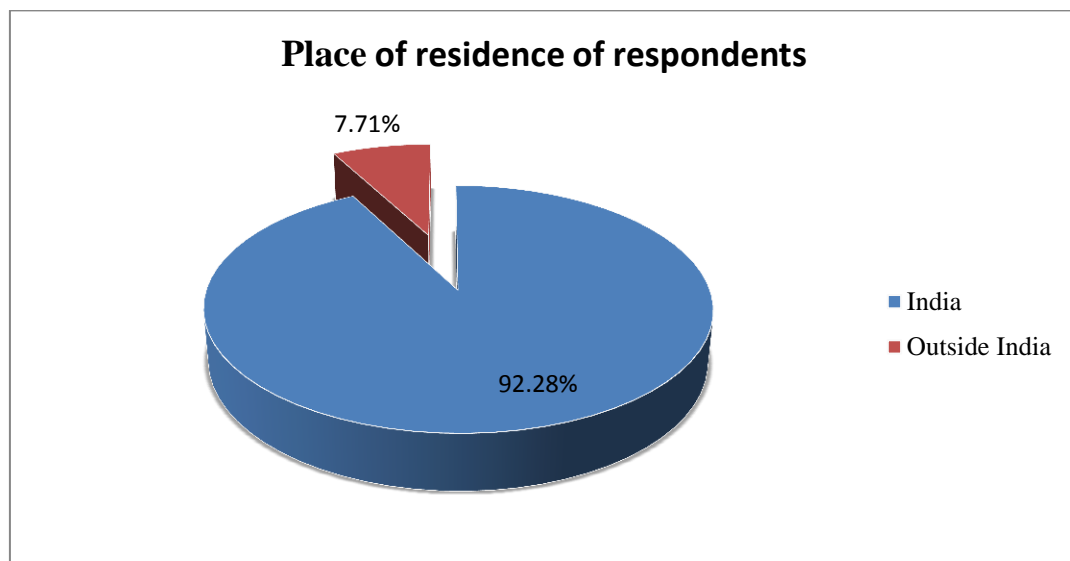
4.4.3. SECTION I-

DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

The objective is to assess the demographic characteristics of the respondents. This data is presented in the tables and their corresponding graphs.

Table 4-51. Distribution of respondents according to whether they are from within India or outside India

Place of residence	Frequency	Percentage
India	371	92.28
Outside India	31	7.71

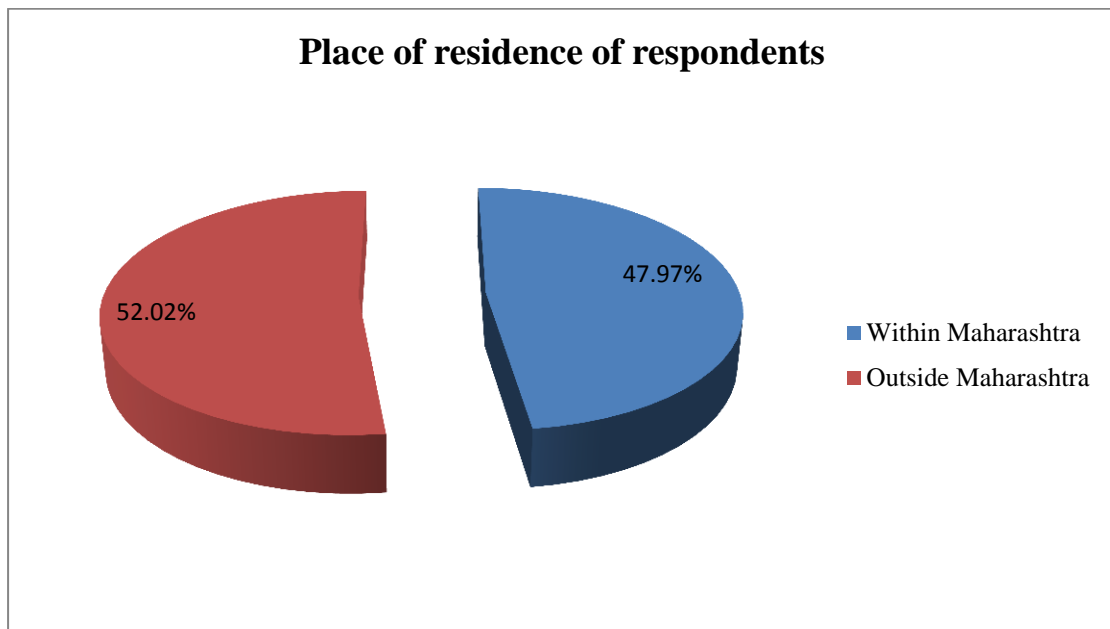


Explanation

From the above table, it can be seen that from amongst the respondents, there were more guests who resided in India (92.28%) than guests who resided outside India (7.71%).

Table 4-52. Distribution of respondents according to whether they are from within Maharashtra or outside Maharashtra

Place of residence	Frequency	Percentage
Within Maharashtra	178	47.97
Outside Maharashtra	193	52.02

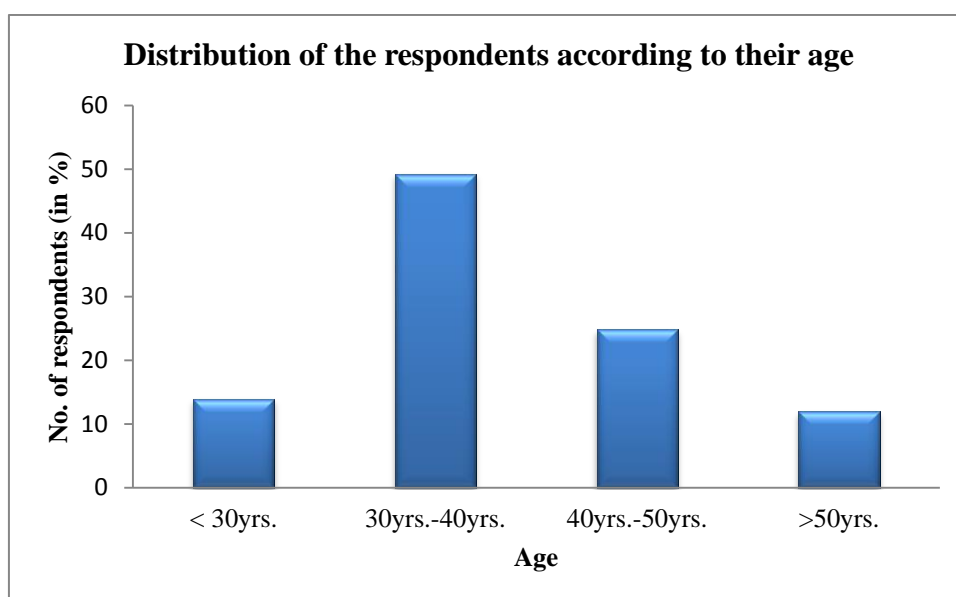


Explanation

From the above table, it can be seen that from amongst the respondents, there were more guests who resided outside Maharashtra (52.02%) than guests who resided within Maharashtra (47.97%).

Table 4-53. Distribution of the respondents according to their age

Age	Frequency	Percentage
< 30yrs.	56	13.93
30yrs.-40yrs.	198	49.25
40yrs.-50yrs.	100	24.88
>50yrs.	48	11.94

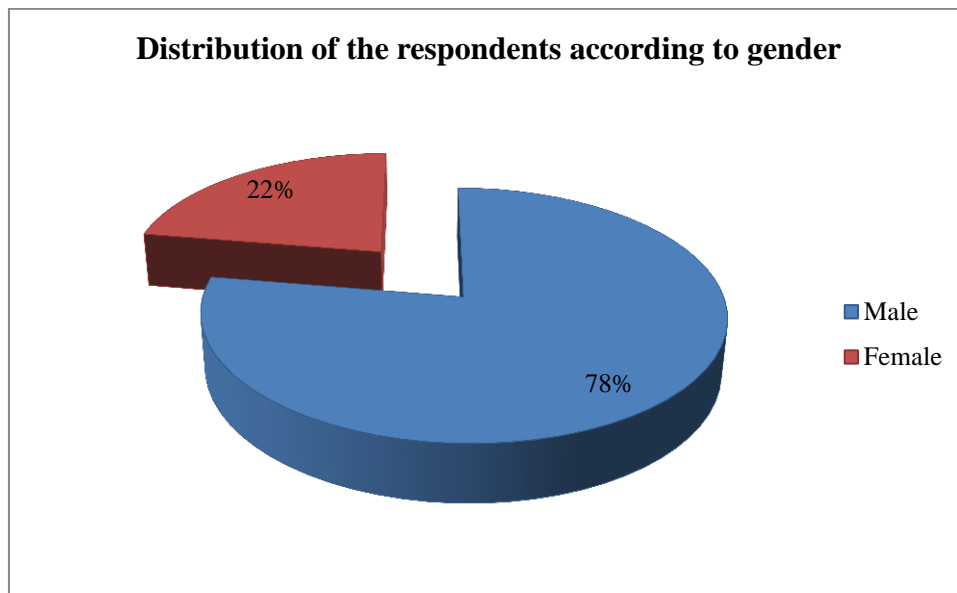


Explanation

We can see from the above table that 13.93% of the respondents were of age less than 30 years. Maximum number of respondents (49.25%) belongs to the age group of 30-40 years. 24.88% were noticed in the age group 40-50 years, 11.94% in the age group above 50 years.

Table 4-54. Distribution of the respondents according to their gender

Gender	Frequency	Percentage
Male	312	77.61
Female	90	22.39

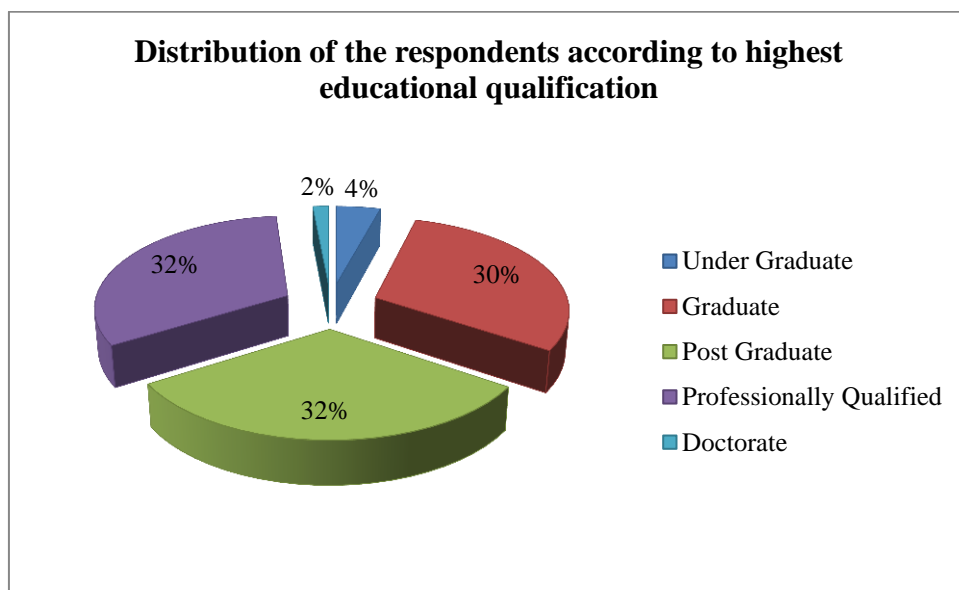


Explanation

From the above table, it can be seen that there were more male guests (77.61%) than female guests (22.39%) who participated in the study.

Table 4-55. Distribution of the respondents according to highest educational qualification

Education level	Frequency	Percentage
Under Graduate	17	4.23
Graduate	121	30.10
Post Graduate	128	31.84
Professionally Qualified	130	32.34
Doctorate	6	1.49



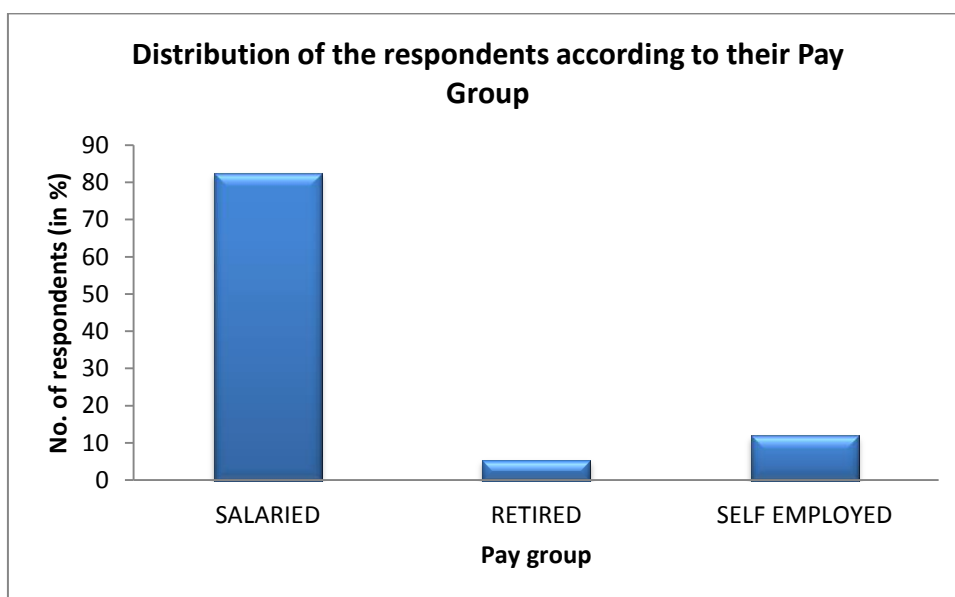
Explanation

From the above table it can be seen that majority of the respondents were professionally qualified (32.34%) and post-graduates (31.84%).

30.10% of the respondents were graduates, 4.23% were undergraduates, while 1.49% of the respondents were doctorate holders.

Table 4-56. Distribution of the respondents according to their pay group

Pay Group	Frequency	Percentage
Salaried	332	82.59
Retired	22	5.47
Self employed	48	11.94



Explanation

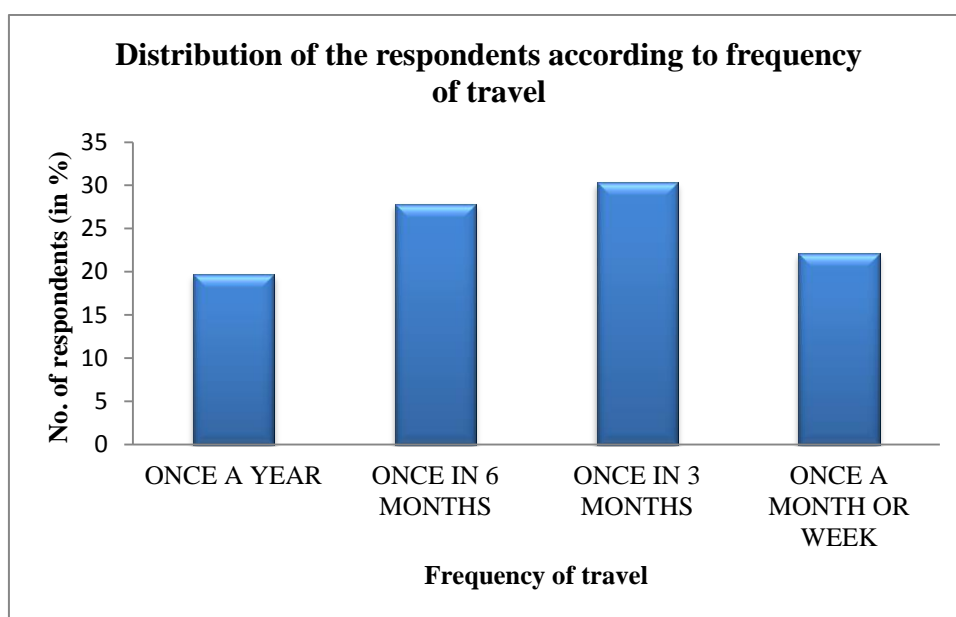
As per the above table, we can see that majority of the guests surveyed were Salaried professionals (82.59%).

The proportion of Self-employed guests was 11.64%.

Very few respondents were retired (5.47%).

Table 4-57. Distribution of the respondents according to frequency of travel

Frequency of travel	Frequency	Percentage
ONCE A YEAR	79	19.65
ONCE IN 6 MONTHS	112	27.86
ONCE IN 3 MONTHS	122	30.35
ONCE A MONTH OR WEEK	89	22.14



Explanation

From the table given above, we can see that 30.35 % of the respondents were guests who travelled once in three months.

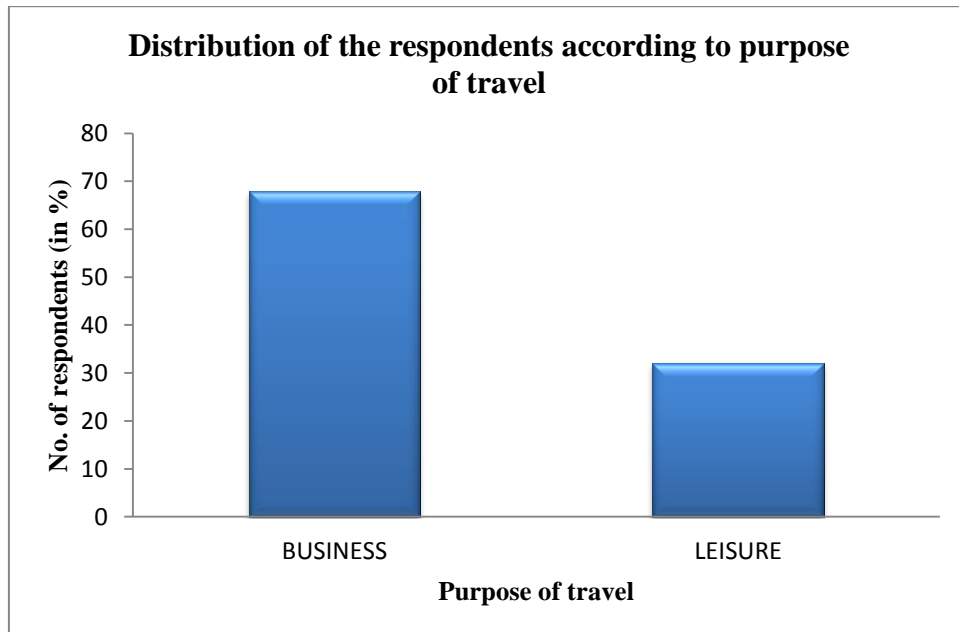
27.86 % of respondents were guests who travelled once in 6 months.

19.65 % of the respondents travelled once a year.

22.14 % of the respondents travelled once a month or once a week.

Table 4-58. Distribution of the respondents according to their purpose of travel

Purpose of travel	Frequency	Percentage
BUSINESS	273	67.91
LEISURE	129	32.09



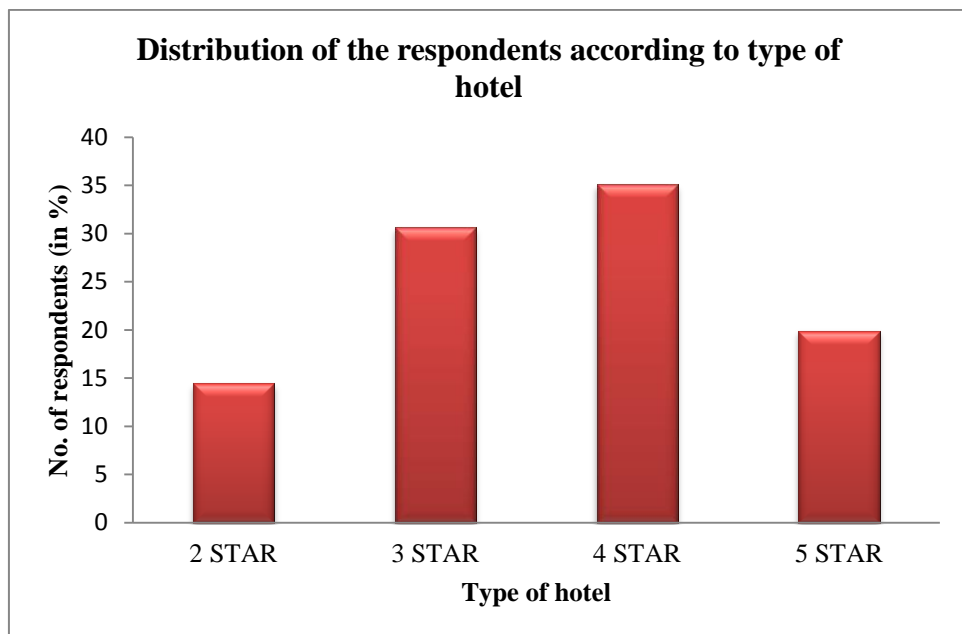
Explanation

From the above table we can see that the maximum number of respondents travelled for the purpose of Business (67.91%).

32.09% of the respondents travelled for Leisure.

Table 4-59. Distribution of the respondents according to type of hotel that they are staying in

Hotel type	Frequency	Percentage
2 STAR	58	14.43
3 STAR	123	30.60
4 STAR	141	35.07
5 STAR	80	19.90



Explanation

It can be seen from the above table that 35.07% of respondents who shared their opinion were staying at 4 star category hotels.

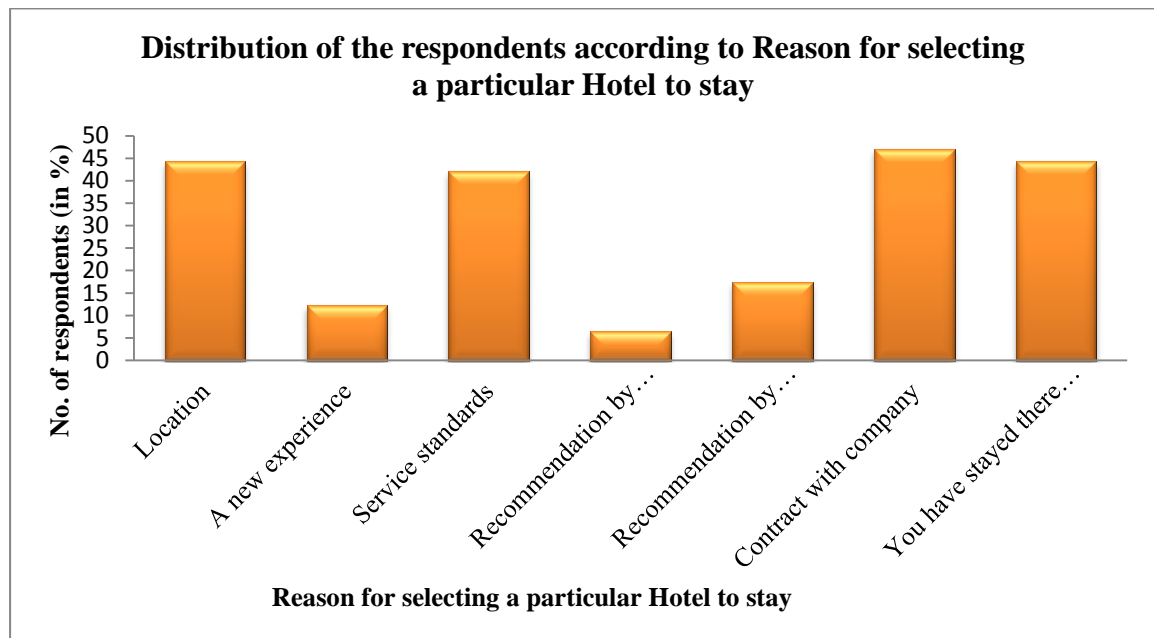
30.60% of respondents were staying at 3 star category hotels.

19.90% of the guests were staying at 5 star hotels.

14.43% of the respondents were staying in 2 star hotels.

Table 4-60. Distribution of the respondents according to Reason for selecting a particular Hotel to stay

Reason for selecting a particular Hotel to stay	Frequency	Percentage
Location	178	44.28
A new experience	49	12.19
Service standards	169	42.04
Recommendation by friend	26	6.47
Recommendation by travel agent	70	17.41
Contract with company	189	47.01
You have stayed there earlier	178	44.28



Explanation

This question gave multiple options to the respondents. They were asked to select all the reasons that they had for selecting a particular hotel.

It can be seen that there are four main reasons respondents select a particular hotel for their stay-Contract with Company (47.01%), Location & that they have stayed there earlier (both 44.28%), followed by Service standards(42.04%).

Recommendation by a travel agent (17.41%), A new experience (12.19%) were the two other reasons selected by the respondents while Recommendation by a friend (6.47%) got the least number of responses.

4.4.4. SECTION II

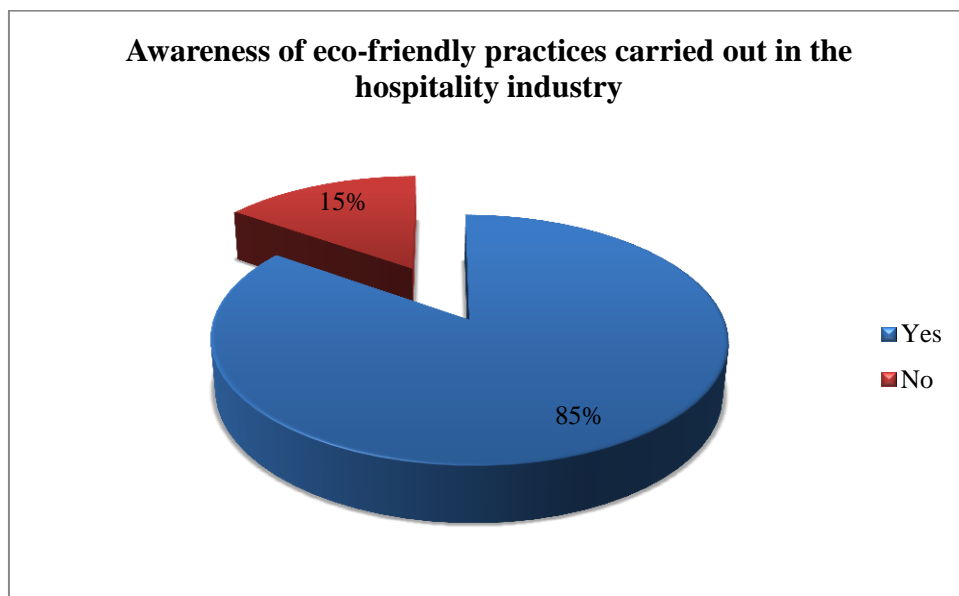
AWARENESS AND EXPERIENCES OF RESPONDENTS WITH GREEN PRACTICES AND TESTING OF HYPOTHESIS H4 & H5

This section seeks to understand the awareness and experiences of respondents with green practices. This data is presented in the form of tables and their corresponding graphs.

This section also presents the results of testing of two Hypothesis- H₄ (H₀₄ and H₁₄) and H₅ (H₀₅ and H₁₅)

Table 4-61. Awareness of eco-friendly practices carried out in the hospitality industry

Awareness of eco-friendly practices carried out in the hospitality industry	Frequency	Percentage	95% CI
Yes	341	84.83	0.81 – 0.88
No	61	15.17	



Explanation

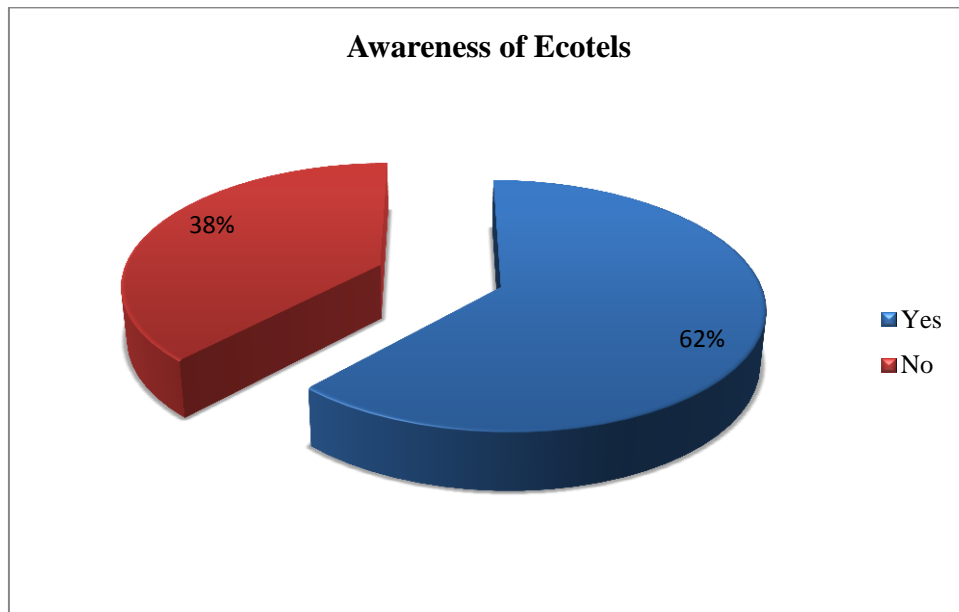
We can see from the above table that 84.83% of the respondents were aware of eco-friendly practices carried out in the hospitality industry with confidence interval 0.81 – 0.88.

As the sample proportion value (0.8483) is within the confidence interval limits, we can say that 85% of the guests are aware of eco-friendly practices carried out in the hospitality industry.

Thus it can be said that 81% to 88% of the guests are aware of eco-friendly practices carried out in the hospitality industry.

Table 4-62. Awareness of Ecotels

Awareness of Ecotels	Frequency	Percentage	95% CI
Yes	249	61.94	0.57- 0.67
No	153	38.06	



Explanation

We can see from the above table that 61.94% of the respondents were aware of Ecotels with confidence interval 0.57 – 0.67.

As the sample proportion value (0.6194) is within the confidence interval limits, we can say that 61% of the guests are aware of Ecotels.

Thus it can be said that 57% to 67% of the guests are aware of Ecotels.

Table 4-63. Experience of stay in a hotel which follows green practices in its day to day operations

Respondents who have stayed in a hotel which follows green practices in its day to day operations	Frequency	Percentage	95% CI
Yes	315	78.36	0.75-0.83
No	87	21.64	



Explanation

We can see from the above table that 78.36% of the respondents say that they have stayed at hotels which follow green practices in their day to day operations with a confidence interval of 0.75-0.83.

21.64% of the respondents have not stayed in a hotel that follows green practices in their day to day operation.

As the sample proportion value (0.7836) is within the confidence interval limits, we can say that 78.36% % of the guests have stayed at hotels which follow green practices in their day to day operations.

Thus it can be said that 75% to 83% of the guests have stayed at hotels which follow green practices in their day to day operations.

If yes, then select the ones (green practices) that you have observed during your stay in that hotel

Table 4-64-1. Waste Management

Sr. No	Category A-Waste Management	Frequency	Percentage
i.	Vermicomposting	33	8.21
ii.	No fruit basket in the room, instead giving a fruit plate on request	17	4.23
iii.	Sewage treatment plant	26	6.47
iv.	Segregation of garbage	28	6.97
v.	Wall mounted soap & shampoo dispensers	18	4.48

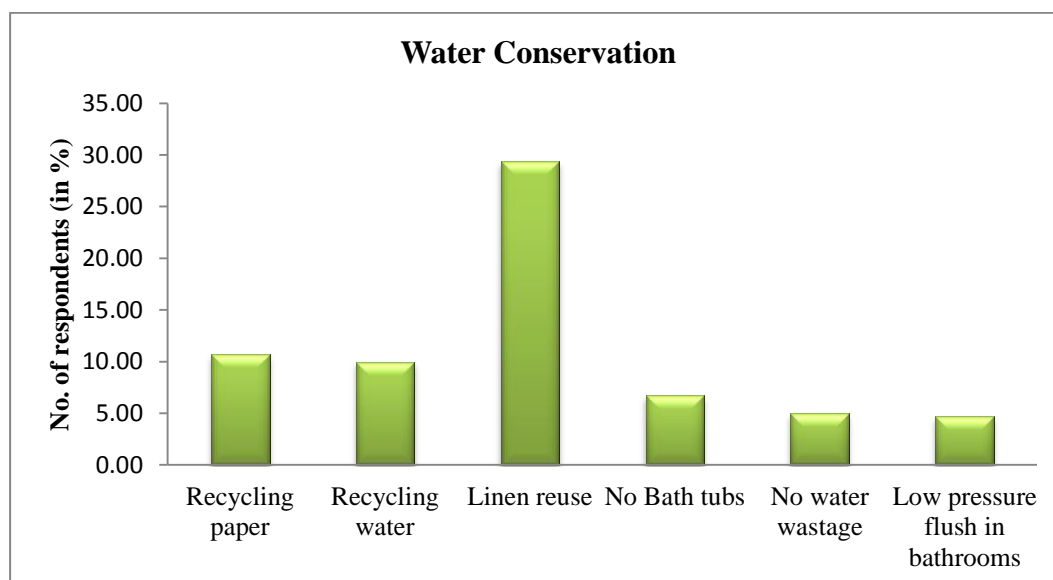


Explanation

We can see from the above table that 8.21% of respondents have observed Vermicomposting, 6.97% have observed Segregation of Garbage, 6.47% have observed Vermicomposting, 4.48% have seen that there are Wall-Mounted Dispensers for soap (body wash) and shampoos while 4.23% have observed that there is No Fruit Basket in the room, instead a fruit plate is given on request.

Table 4-64-2. Water Conservation

Sr. No	Category B-Water Conservation	Frequency	Percentage
i.	Recycling paper	43	10.70
ii.	Recycling water	40	9.95
iii.	Linen reuse	118	29.35
iv.	No Bath tubs	27	6.72
v.	No water wastage	20	4.98
vi.	Low pressure flush in bathrooms	19	4.73

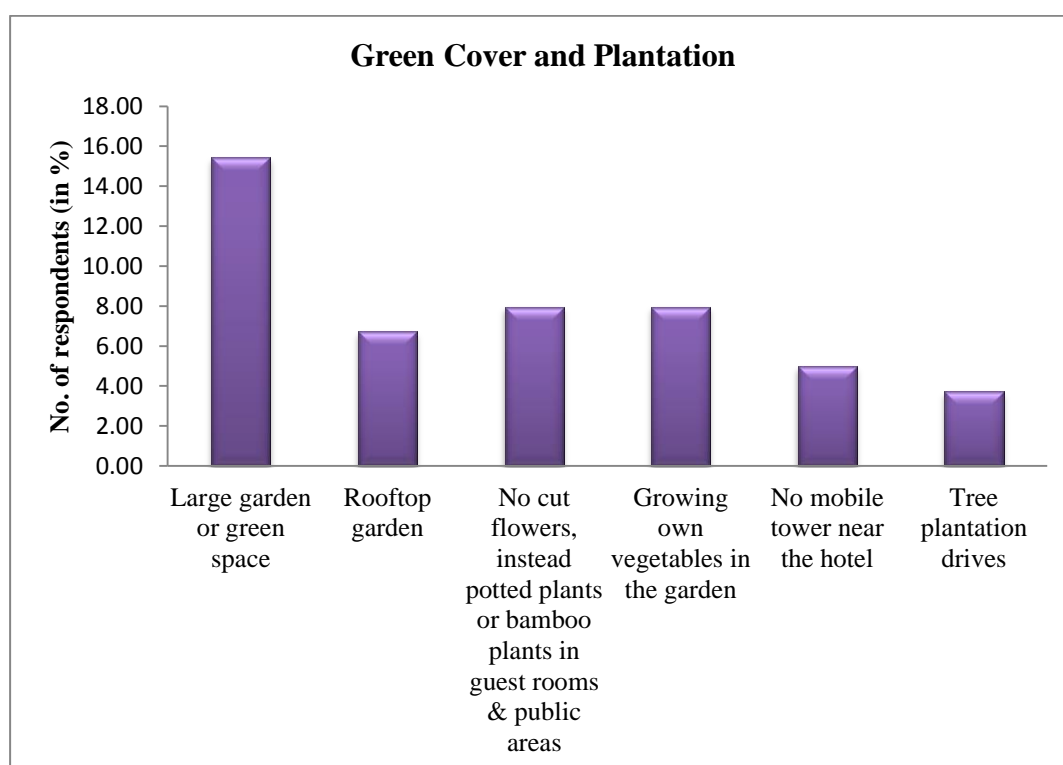


Explanation

We can see from the above table that 29.35% of the respondents have observed Linen reuse, 10.70% have observed Recycling of Paper, 9.95% have observed Reuse of Water, 6.72% have observed No Bathtubs in bathrooms, 4.98% have observed No Water Wastage while 4.73% have observed Low-Pressure Flush in bathrooms.

Table 4-64-3. Green Cover & Plantation

Sr. No	Category C-Green Cover and Plantation	Frequency	Percentage
i.	Large garden or green space	62	15.42
ii.	Rooftop garden	27	6.72
iii.	No cut flowers, instead potted plants or bamboo plants in guest rooms & public areas	32	7.96
iv.	Growing own vegetables in the garden	32	7.96
v.	No mobile tower near the hotel	20	4.98
vi.	Tree plantation drives	15	3.73

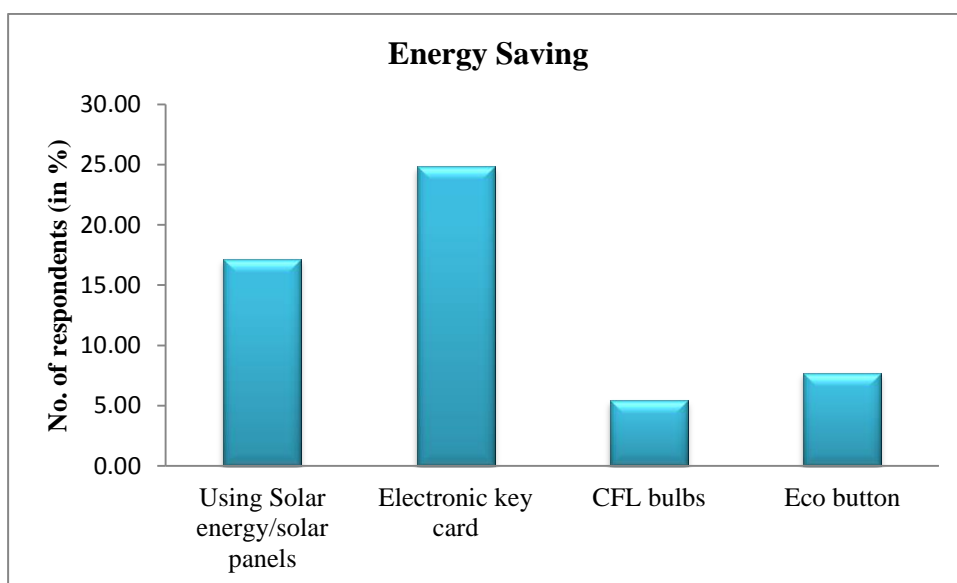


Explanation

We can see from the above table that 15.42% of the respondents have observed Large gardens or green spaces, 7.96% have observed No Cut Flowers, instead potted plants or bamboo plants in guest rooms & public areas, 7.96% have observed Growing Vegetables or herbs in their own garden, 6.72 % have observed a Rooftop Garden, 4.98% have observed No Mobile Tower near the hotel while 3.73 % have observed Tree Plantation Drives.

Table 4-64-4. Energy Saving

Sr. No	Category D-Energy Saving	Frequency	Percentage
i.	Using Solar energy/solar panels	69	17.16
ii.	Electronic key card	100	24.88
iii.	CFL bulbs	22	5.47
iv.	Eco button	31	7.71

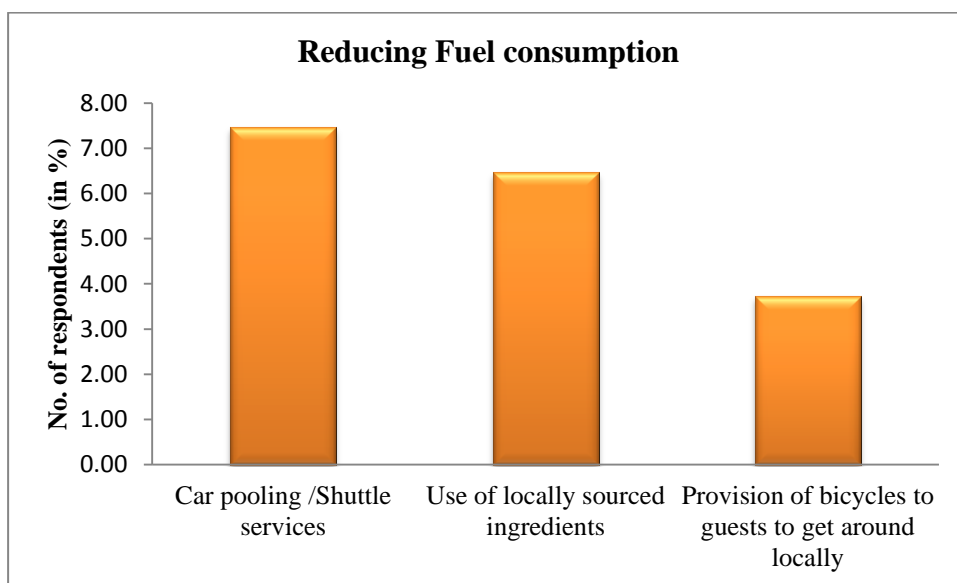


Explanation

We can see from the above table that 24.88 % of the respondents have observed Electronic key cards, 17.16% have observed Solar Panels, 5.47 % have observed CFL bulbs while 7.71 % have observed Eco-button.

Table 4-64-5. Reducing Fuel Consumption

Sr. No	Category E-Reducing Fuel consumption	Frequency	Percentage
i.	Carpooling /Shuttle services	30	7.46
ii.	Use of locally sourced ingredients	26	6.47
iii.	Provision of bicycles to guests to get around locally	15	3.73

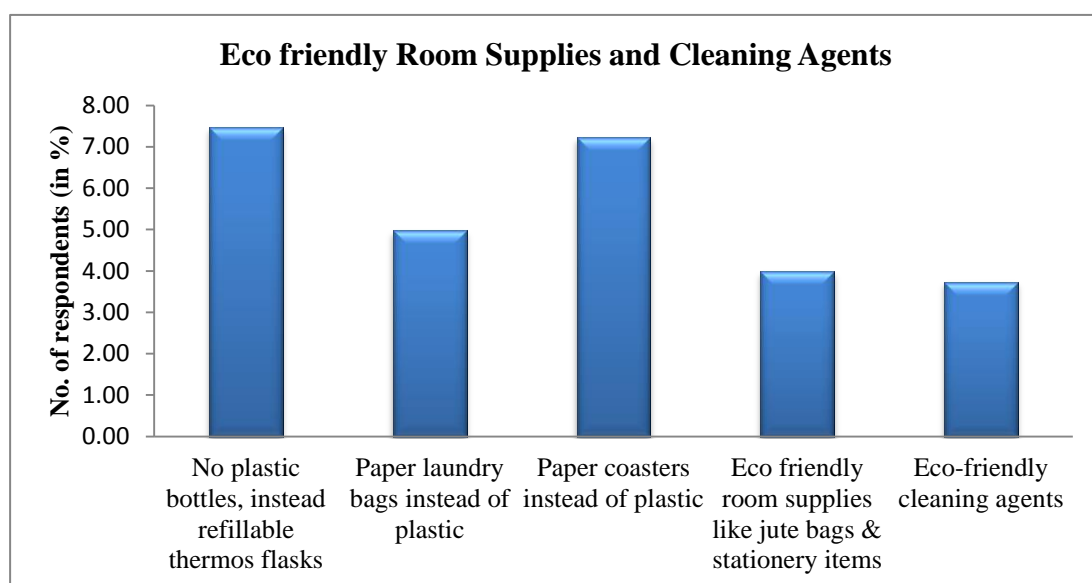


Explanation

We can see from the above table that 7.46 % of the respondents have observed Carpooling or shuttle services, 6.47% have observed use of Locally sourced ingredients while 3.73 % have observed Provision of bicycles to get around locally.

Table 4-64-6. Eco Friendly Room Supplies & Cleaning Agents

Sr. No	Category F-Eco friendly Room Supplies and Cleaning Agents	Frequency	Percentage
i.	No plastic bottles, instead refillable thermos flasks	30	7.46
ii.	Paper laundry bags instead of plastic	20	4.98
iii.	Paper coasters instead of plastic	29	7.21
iv.	Eco friendly room supplies like jute bags & stationery items	16	3.98
v.	Eco-friendly cleaning agents	15	3.73

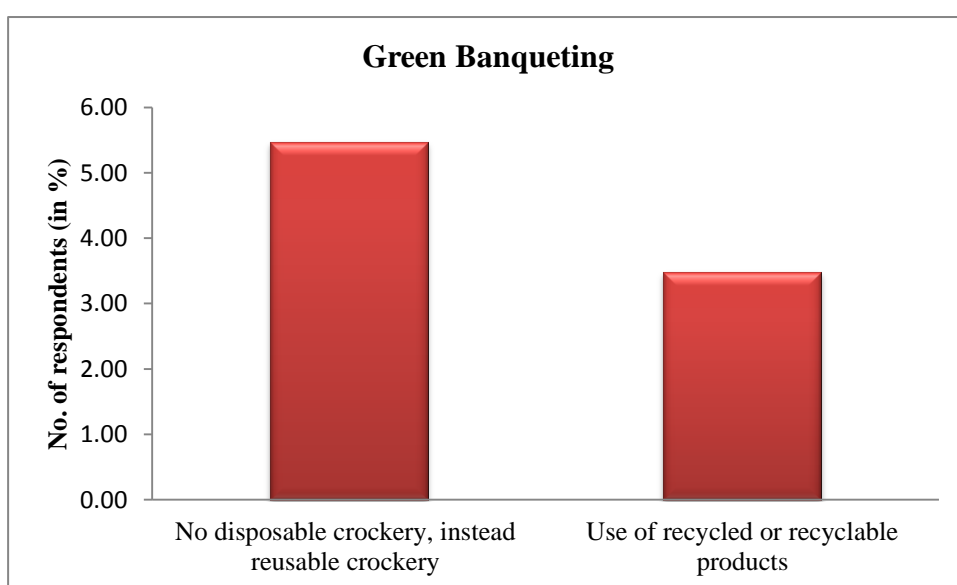


Explanation

We can see from the above table that 7.46 % of the respondents have observed No Plastic bottles, 7.21% have observed Paper coasters, 4.98% have observed Paper laundry bags, 3.98% have observed Eco-friendly room supplies while 3.73 % have observed Eco-friendly cleaning agents.

Table 4-64-7. Green Banqueting

Sr. No	Category G-Green Banqueting	Frequency	Percentage
i.	No disposable crockery, instead reusable crockery	22	5.47
ii.	Use of recycled or recyclable products	14	3.48



Explanation

We can see from the above table that 5.47 % of the respondents have observed No Disposable crockery while 3.48% have observed Use of recycled or recyclable products.

Table 4-64-8. Green Certification

Sr. No	Category H-Green Certification	Frequency	Percentage
i.	Ecotel Certification	16	3.98

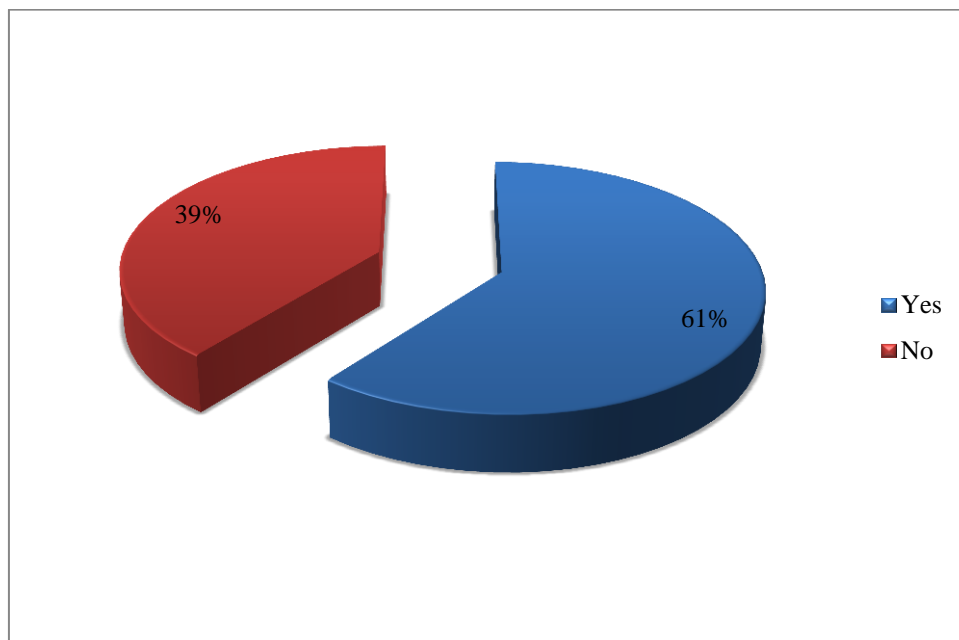


Explanation

We can see from the above table that 3.98 % of the respondents have observed Ecotel certification.

Table 4-65. Hotel is following green practices in its operations

Whether the Hotel in which the respondent is currently staying in at the moment is following green practices in its operations	Frequency	Percentage	95% CI
Yes	244	60.70	0.56-0.66
No	158	39.30	



Explanation

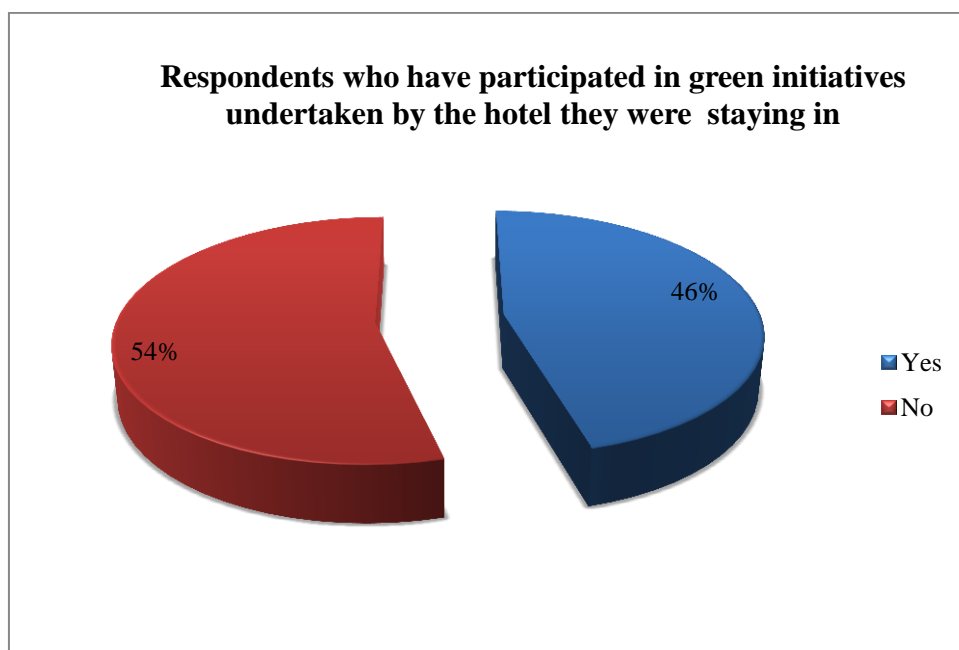
From the above table it is seen that although 60.70% of the Respondents felt that the hotel that they were currently staying in was following green practices in its daily operations, 39.30% of the Respondents felt that the hotel that they were staying in currently was not following green practices in its daily operations.

As the sample proportion value (0.6070) is within the confidence interval limits, we can say that 60.70 % of the guests feel that the hotel which they are staying in at the moment is following green practices in their day to day operations.

Thus it can be said that 56% to 66% of the guests feel that the hotel which they are staying in at the moment is following green practices in their day to day operations.

Table 4-66. Participation in green initiatives undertaken by the hotel you were staying in

Respondents who have participated in green initiatives undertaken by the hotel they were staying in	Frequency	Percentage	95% CI
Yes	184	45.77	0.40-0.51
No	218	54.23	



Explanation

From the above table it is clear that only less than half of the Respondents surveyed (45.77%) have participated in green initiatives of the hotel that they were staying in.

Majority (54.23%) have not participated in such green initiatives and practices.

As the sample proportion value (0.4577) is within the confidence interval limits, we can say that 45.77 % of the guests have participated in green initiatives undertaken by the hotel they were staying in.

Thus it can be said that only 40% to 51% of the guests have participated in green initiatives undertaken by the hotel they were staying in.

TESTING OF HYPOTHESIS H₄

H₄. “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these initiatives.”

For the purpose of testing this hypothesis, the Null Hypothesis (H₀₄) and Alternate Hypothesis (H₁₄) were defined as under-

Table 4-67. Testing of Hypothesis H₄

Hypothesis	P-Value	Decision
H ₀₄ . Majority of the Customers/Guests staying in properties following green/eco-friendly practices have not participated in these initiatives. Vs. H ₁₄ . Majority of the Customers/Guests staying in properties following green/eco-friendly practices have participated in these initiatives.	0.960 ^{NS}	Accept H ₀₄

NS: Not significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Have you as a guest participated in green initiatives undertaken by the hotel you were staying in?

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-184

N-402

Sample p - 0.457711

95% Lower Bound- 0.415929

P-Value- 0.960

Source- Minitab Output

As p-value is greater than 0.05 we accept H_0 and conclude that majority of the Customers/Guests staying in properties following green/eco-friendly practices have not participated in these initiatives.

Conclusion

Acceptance of Null hypothesis and rejection of Alternate hypothesis indicates that majority of the Customers/Guests staying in properties following green/eco-friendly practices are not willing participants in these initiatives.

So, we reject H_4 - “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these initiatives.”

If yes then rate your response on a scale of 1 to 5, with 1 being least and 5 being maximum value to show the level of participation in each of these practices in the hotel.

Table 4-68. Rating of responses to show level of implementation of various categories of green practices in hotels as observed by guests

Rate	Green practices	Waste Management	Water Conservation	Tree Plantation programme	Energy Saving	Reducing Fuel Consumption
1	<i>f</i>	45	25	168	22	134
	<i>f in %</i>	24.46	13.59	91.30	11.96	72.83
2	<i>f</i>	67	70	10	37	27
	<i>f in %</i>	36.41	38.04	5.43	20.11	14.67
3	<i>f</i>	43	44	4	49	13
	<i>f in %</i>	23.37	23.91	2.17	26.63	7.07
4	<i>f</i>	27	39	2	54	10
	<i>f in %</i>	14.67	21.20	1.09	29.35	5.43
5	<i>f</i>	2	6	0	22	0
	<i>f in %</i>	1.09	3.26	0.00	11.96	0.00

Explanation

1. Waste Management

From the above table it can be seen that 24.25% of the respondents rated their level of participation in the Hotel's Waste Management Programmes as 1, 36.41% rated it as 2, 23.37% rated it as 3, 14.67% rated it as 4.

Only 1.09% of the respondents rated it at 5.

2. Water Conservation

From the above table it can be seen that 13.59% of the respondents rated their level of

participation in the Hotel's Water Conservation Programmes as 1, 38.04% rated it as 2, 23.91% rated it as 3, 21.20% rated it as 4.

Only 3.26 % of the respondents rated it at 5.

3. Tree Plantation Programme

From the above table it can be seen that 91.30% of the respondents rated their level of participation in the Hotel's Tree Plantation Programmes as 1, 5.43 % rated it as 2, 2.17% rated it as 3, 1.09 % rated it as 4.

None of the respondents rated it at 5.

4. Energy Saving Programme

From the above table it can be seen that 11.96 % of the respondents rated their level of participation in the Hotel's Energy Saving as 1, 20.11 % rated it as 2, 26.63 % rated it as 3, 29.35 % rated it as 4.

11.96% of the respondents rated it at 5.

5. Reducing Fuel Consumption

From the above table it can be seen that 72.83 % of the respondents rated their level of participation in the Reducing Hotel's Fuel Consumption as 1, 14.67 % rated it as 2, 7.07 % rated it as 3, 5.43% rated it as 4.

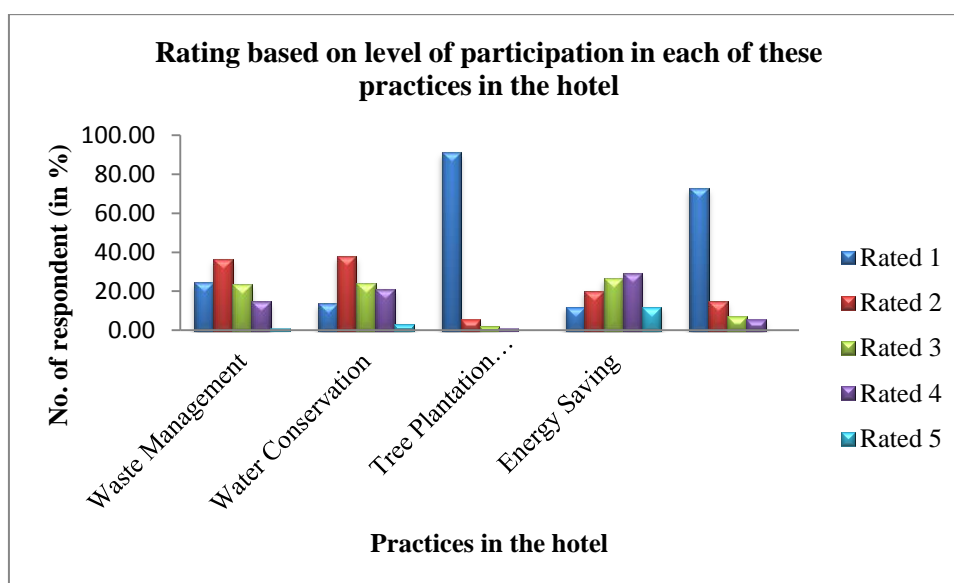
None of the respondents rated it at 5.

KRUSKAL-WALLIS TEST

Table 4-69. Kruskal Wallis Test Rating based the level of implementation of various categories of green practices followed in the hotel as observed by guests

Descriptive statistics	Waste Management	Water Conservation	Tree Plantation programme	Energy Saving	Reducing Fuel Consumption
Mean	2.32	2.63	1.13	3.09	1.45
SD	2	2	1	3	1
Median	1.03	1.06	0.47	1.20	0.85
p-value	0.000**				

Kruskal-Wallis Test, **: Highly significant difference



Explanation

The above chart explains the Mean and Median rating of the respondent participation in the various green practices of the hotel. The Standard Deviation is also mentioned.

1. Waste Management Practices

The Median rating of the respondent participation is 1.30 with Standard Deviation of 2.

Water Conservation

The Median rating of the respondent participation is 1.03 with a Standard Deviation of 2.

2. Tree Plantation Programme

The Median rating of the respondent participation is 0.47 with a Standard Deviation of 1.

3. Energy Saving Programme

The Median rating of the respondent participation is 1.20 with a Standard Deviation of 3.

4. Reducing Fuel Consumption

The Median rating of the respondent participation is 0.85 with a Standard Deviation of 1.

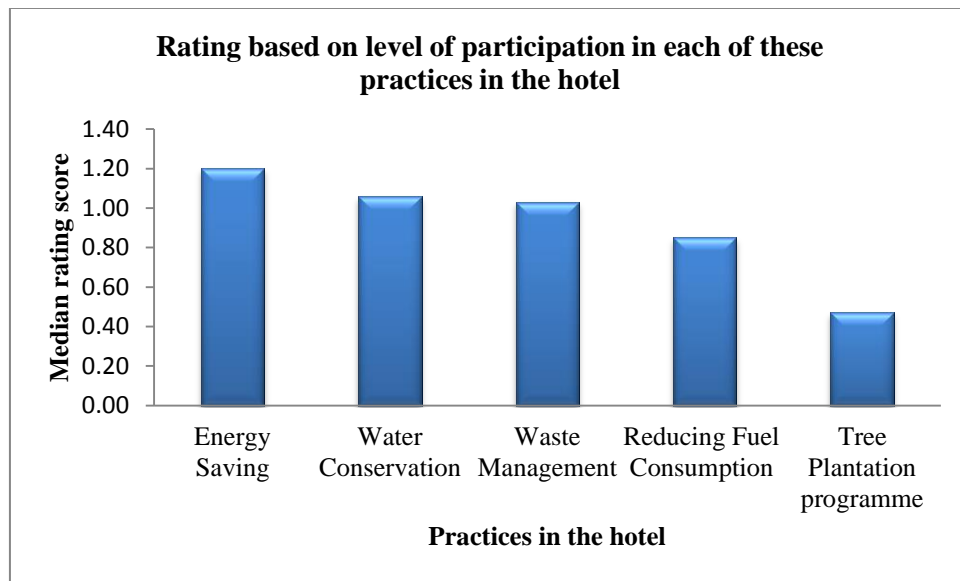
The Median rating is the lowest for tree plantation programme (0.47) and the highest rating is for energy saving (1.20).

So we conclude that most of the respondents have participated in Energy Saving green practices with the highest Median rating of 1.20, while very few have participated in Tree Plantation programme with its lowest Median rating of 0.47.

Conclusion

The Kruskal-Wallis statistic for the data is **344.81** and the p-value is **0.000**. Because the p-value is very very small (less than the common α -level of 0.05), the test is highly significant. Thus, we can conclude that the level of participation in each of these practices in the hotel is different.

Graph 4-2. Median Rating Score as per guest observations



Explanation

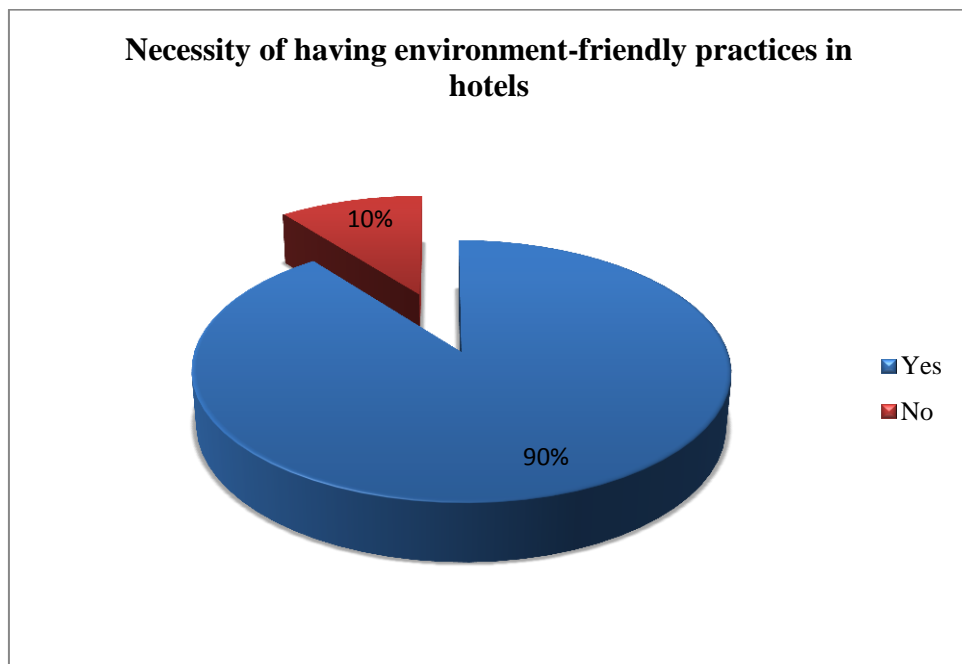
From this table and chart we can see the ratings given by the respondents to show their level of participation in the various green practices carried out by hotels in the order of highest to lowest-

1. Energy Saving-Highest Median rating of 1.20
2. Water Conservation- Median rating of 1.06
3. Waste Management- Median rating of 1.03
4. Reducing fuel Consumption- Median rating of 0.85
5. Tree Plantation Programme-Lowest Median rating of 0.47

So we conclude that most of the respondents have participated in Energy Saving green practices with the highest median rating of 1.20, while very few have participated in Tree Plantation programme with its lowest median rating of 0.47.

Table 4-70. Necessity of having environment-friendly practices in hotels

Do you feel the necessity of having environment-friendly practices in hotels	Frequency	Percentage	95% CI
Yes	360	89.55	0.86-0.92
No	42	10.45	



Explanation

From the above table we can see that majority of the respondents (89.55%) have said that there is a necessity of having environment-friendly practices in hotels.

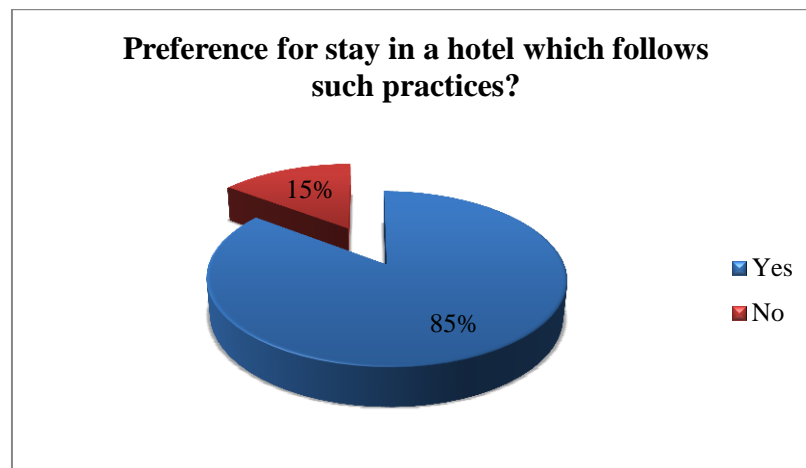
10.45% of the respondents feel that there is no necessity of having these practices in hotels.

As the sample proportion value (0.8955) is within the confidence interval limits, we can say that 89.55% of the guests feel there is a necessity of having environment-friendly practices in hotels.

Thus it can be said that 86% to 92% of the guests feel there is a necessity of having environment-friendly practices in hotels.

Table 4-71. Preference for stay in a hotel which follows such practices

Preference for stay in green hotels	Frequency	Percentage	95% CI
Yes	343	85.32	0.81-0.89
No	59	14.68	



Explanation

Looking at the above table it is clear that most of the respondents surveyed (85.32%) would prefer to stay in a hotel which is green, i.e. follows environment-friendly practices.

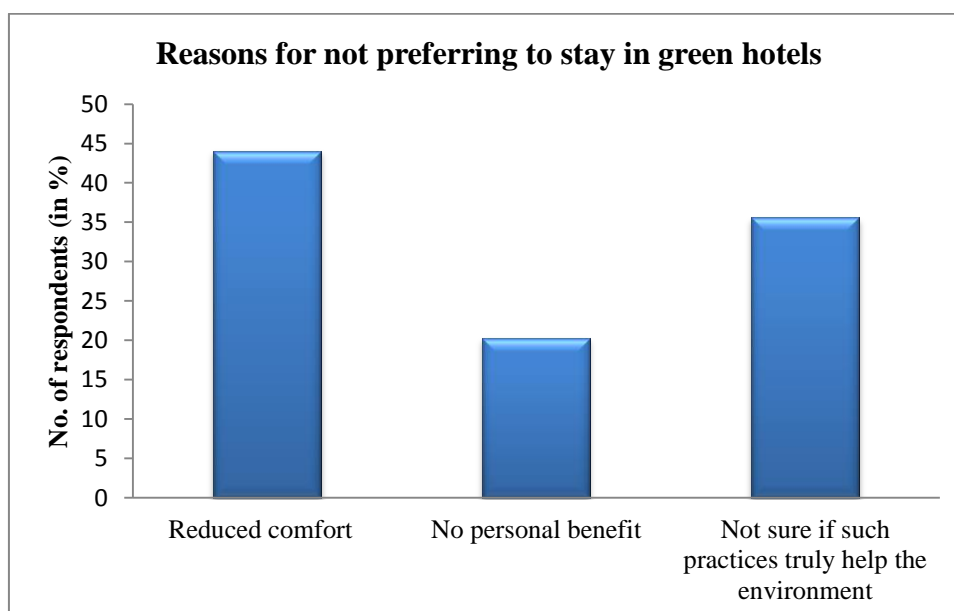
14.68% of the respondents have said that they would not prefer to stay in such hotels.

As the sample proportion value (0.8532) is within the confidence interval limits, we can say that 85.32% of the guests would prefer to stay in a hotel which is green, i.e. follows environment-friendly practices.

Thus it can be said that 81% to 89% of the guests would prefer to stay in a hotel which is green, i.e. follows environment-friendly practices.

Table 4-72. Reason for not preferring to stay in green hotels

Reason for not preferring to stay in green hotels	Frequency	Percentage
Reduced comfort	26	44.07
No personal benefit	12	20.34
Not sure if such practices truly help the environment	21	35.59



Explanation

From the above table it can be seen that out of the 14.68% respondents who have said that they do not prefer green hotels in the earlier table, a majority (44.07%) feel that staying in such hotels would mean reduction in comfort.

35.59% of the respondents stated that their reason for not preferring a green hotel was because they were not sure that such practices truly help the environment.

20.34% of the respondents felt that they would not get any personal benefit from staying in such hotels, hence would not prefer such hotels.

Table 4-73. Green hotels are more expensive than other hotels

Green hotels are more expensive than other hotels	Frequency	Percentage	95% CI
Yes	255	63.43	0.59 - 0.68
No	147	36.57	



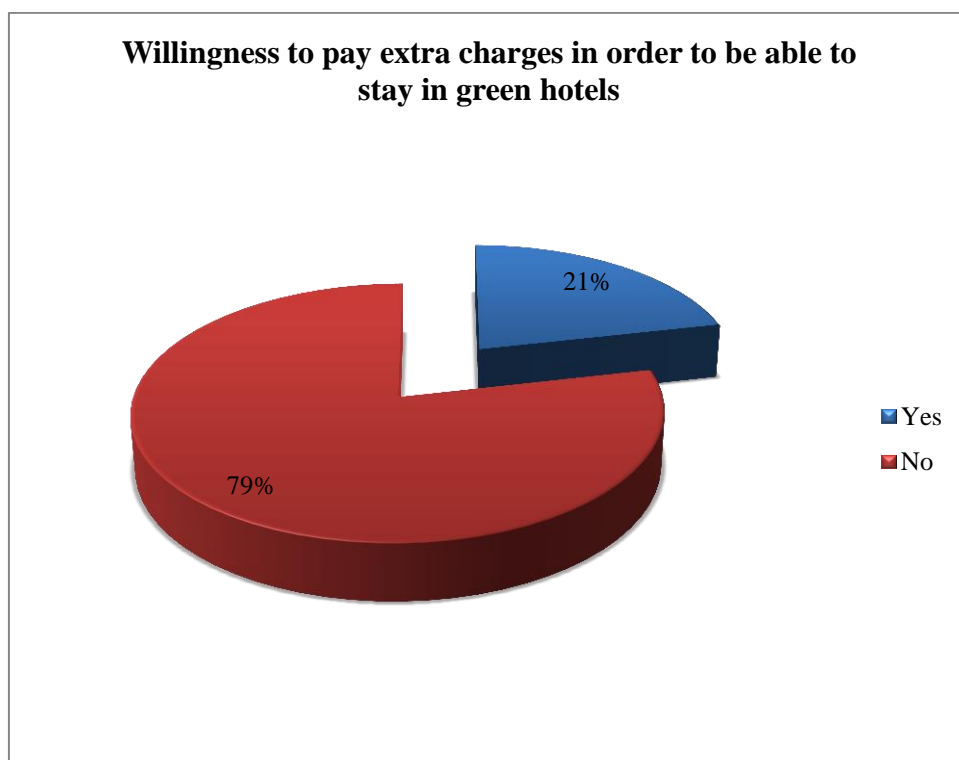
Explanation

From the above table we can see that 63.43% of the respondents feel that green hotels are more expensive than those which do not implement such practices. 36.57% feel that these hotels are not expensive as compared to those which do not follow green practices.

As the 95% Confidence Interval is 0.59 to 0.68, we can say 59% to 68% of the guests think that hotels following green practices might be more expensive as compared to those which do not follow or implement such practices.

Table 4-74. Willingness to pay extra charges in order to be able to stay in green hotels

Respondent's willingness to pay extra for green hotels	Frequency	Percentage	95% CI
Yes	86	21.50	0.18 – 0.26
No	314	78.50	



Explanation

From the above table we can see that only 21.50 % of guests are willing to pay extra money, while 78.50 % are not willing to pay extra in order to be able to stay in a hotel which follows green practices.

With 95% of the confidence we can say 18% to 26% of the guests are willing to pay extra money to be able to stay in hotels following green practices.

TESTING OF HYPOTHESIS H₅

H₅. “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.

For the purpose of testing this hypothesis, the Null Hypothesis (H₀₅) and Alternate Hypothesis (H₁₅) were defined as under-

Table 4-75. Testing of Hypothesis H₅

Hypothesis	P-Value	Decision
H ₀₅ . Majority of the Customers/Guests are not willing to pay extra money to be able to stay in hotels following green practices. Vs. H ₁₅ . Majority of the Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.	1.00 ^{NS}	Accept H ₀₅

NS: Not significant difference, One sample proportion test

TEST USED -ONE SAMPLE PROPORTION TEST

Test and CI for One Proportion:

Test of $p = 0.5$ vs. $p > 0.5$

Event = Yes

Variable- As above

X-88

N-402

Sample p- 0.218905

95% Lower Bound- 0.185362

P-Value- 1.000

Source- Minitab Output

As p-value is 1.00, which is greater than 0.05 we accept H_{05} and conclude that Majority of the Customers/Guests are not willing to pay extra money to be able to stay in hotels following green practices.

Conclusion

Acceptance of Null hypothesis and rejection of Alternate hypothesis indicates that majority of the respondents are not willing to pay extra money to be able to stay in hotels following green practices.

So, we reject H_5 - “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.

Table 4-76. Summary of Hypothesis Testing

Sr No	Hypothesis	Accept/Reject
1.	<u>H₁</u> . “Two star to Five Star category hotels and resorts in Pune region have started implementing green or environment-friendly practices in their daily operations.”	Accept
2.	<u>H₂</u> . “The overall performance of the hotels has been positively affected after implementing these practices.”	Accept
3.	<u>H₃</u> - “Implementing such practices in hotels involves substantial costs”	Reject
4.	<u>H₄</u> . “Customers/Guests staying in properties following green/eco-friendly practices are willing participants in these initiatives.”	Reject
5.	<u>H₅</u> - “Customers/Guests are willing to pay extra money to be able to stay in hotels following green practices.	Reject

4.4.5. SECTION III ASSOCIATION OF VARIABLES

This section presents the association of variables. This data is presented in the form of tables and their corresponding graphs.

4.4.5.1. ASSOCIATION OF VARIABLE ‘AGE’ WITH OTHER VARIABLES

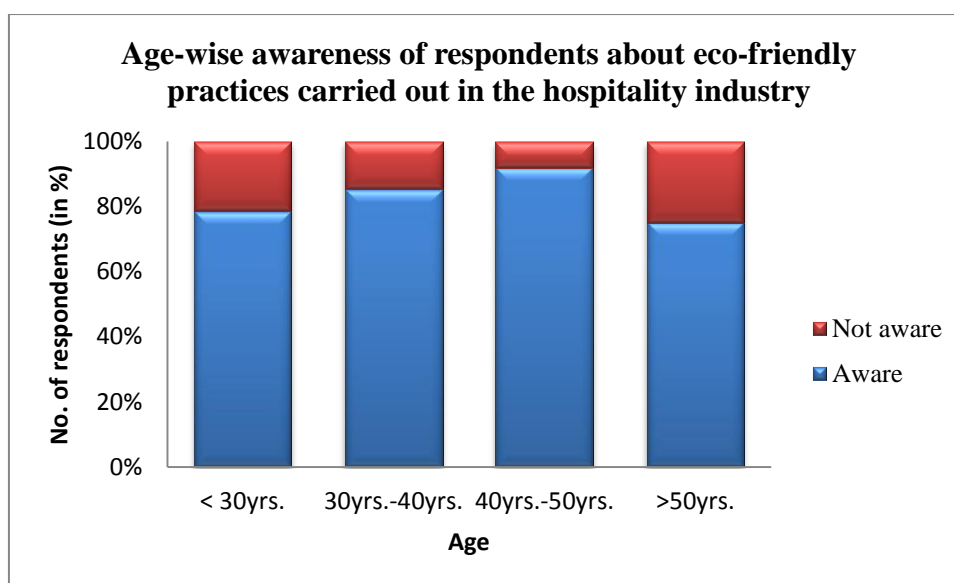
Table 4-77.

To test the association between the age of the respondent and their awareness about eco-friendly practices carried out in the hospitality industry, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Age	Awareness about eco-friendly practices carried out in the hospitality industry				p value
	Aware	percentage	Not aware	percentage	
< 30yrs.	44	78.57	12	21.43	0.025*
30yrs.-40yrs.	169	85.35	29	14.65	
40yrs.-50yrs.	92	92.00	8	8.00	
>50yrs.	36	75.00	12	25.00	

Chi-square test for independence of attributes, *: Significant association



Conclusion

The awareness about eco-friendly practices carried out in the hospitality industry depends on age of respondent (as $p\text{-value} < 0.05$).

As per the analysis and interpretation of data, it is found that 78.57% respondents in the age group below 30 years were found to be aware of these practices, while 21.43% were not aware. 85.35% respondents in the age group of 30 to 40 years, while 14.65% were not aware. 92% respondents in the age group of 40 to 50 years were aware, while 8% were not aware; and 75% of guests above 50 years were found to be aware of such practices, while 25% were not aware.

So, it can be said that Awareness about eco-friendly practices carried out in the hospitality industry is related to the age of the respondents. Most guests across all age-groups are aware of these practices; however, only 75% of guests in the age group above 50 are found to be aware which is slightly lesser than in the other age-groups.

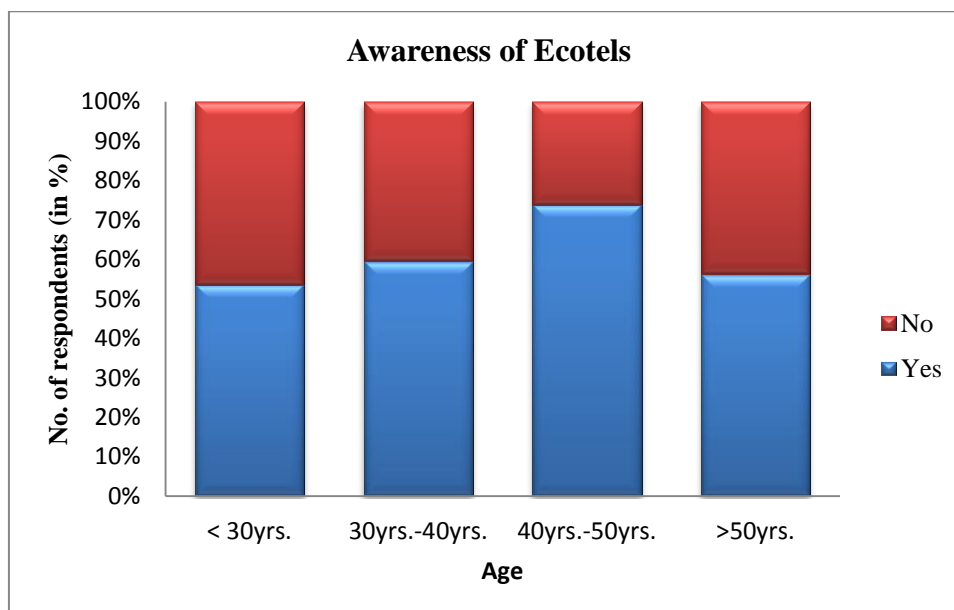
Table 4-78.

To test the association between the age of the respondent and their awareness about Ecotels, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Age	Awareness of Ecotels				p-value
	Aware	percentage	Not aware	percentage	
< 30yrs.	30	53.57	26	46.43	0.03*
30yrs.-40yrs.	118	59.6	80	40.4	
40yrs.-50yrs.	74	74	26	26	
>50yrs.	27	56.25	21	43.75	

Chi-square test for independence of attributes, *: Significant association



Conclusion

The awareness about Ecotels depends on age of respondent (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that 53.57 % respondents in the age group below 30 years were found to be aware of Ecotels, while 46.43% were not aware. 59.6 % respondents in the age group of 30 to 40 years while 40.4% were not aware. 74 % respondents in the age group of 40 to 50 years were found to be aware of such practices and 56.25 % of guests above 50 years were found to be aware of such practices.

So, it can be said that Awareness about Ecotels is related to the age of the respondents, more respondents in the 30 to 50 years of age were found to be aware of Ecotels as compared to the respondents in the other age groups.

4.4.5.2. ASSOCIATION OF VARIABLE ‘FREQUENCY OF TRAVEL’ WITH OTHER VARIABLES

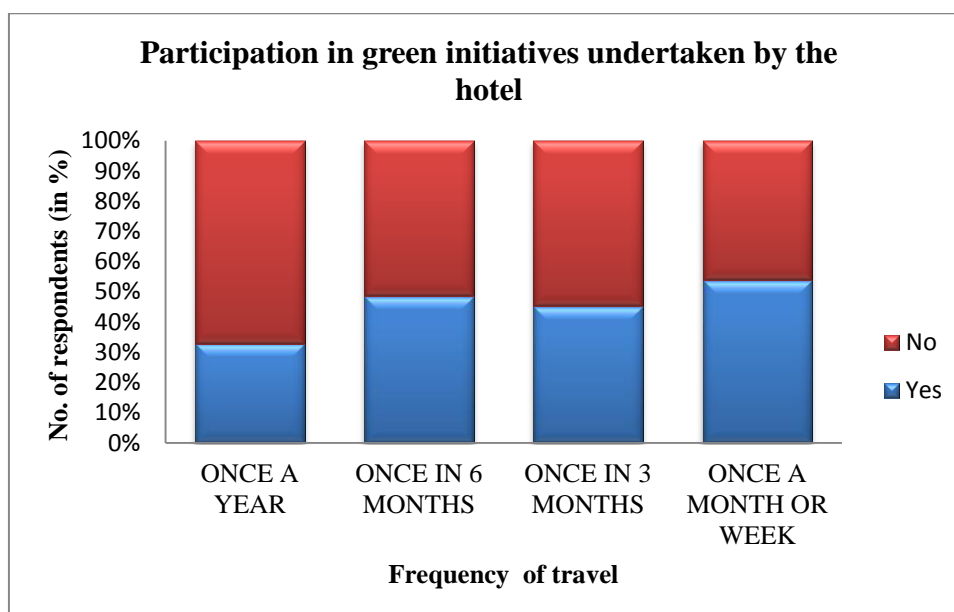
Table 4-79.

To test the association between the Frequency of travel of the respondent and their participation in green initiatives undertaken by the hotel, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Frequency of travel	Participation in green initiatives undertaken by the hotel				p-value
	Yes	percentage	No	percentage	
ONCE A YEAR	67	84.81	12	15.19	0.014*
ONCE IN 6 MONTHS	85	75.89	27	24.11	
ONCE IN 3 MONTHS	109	89.34	13	10.66	
ONCE A MONTH OR WEEK	80	89.89	9	10.11	

Chi-square test for independence of attributes, *: Significant association



Conclusion

Participation in green initiatives is related to the frequency of travel of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that of the total respondents who participated in green initiatives, 84.81% respondents travelled once a year, 75.89% respondents travelled once in six months, 89.34% respondents travelled once in three months. 89.89% of the respondents traveled once a month or week

So, it can be said that Participation in green initiatives is related to the frequency of travel of the respondent, frequent travellers i.e. those that travelled once a week/once a month and once in three months participate more in green initiatives as compared to those that travelled once in six months or a year.

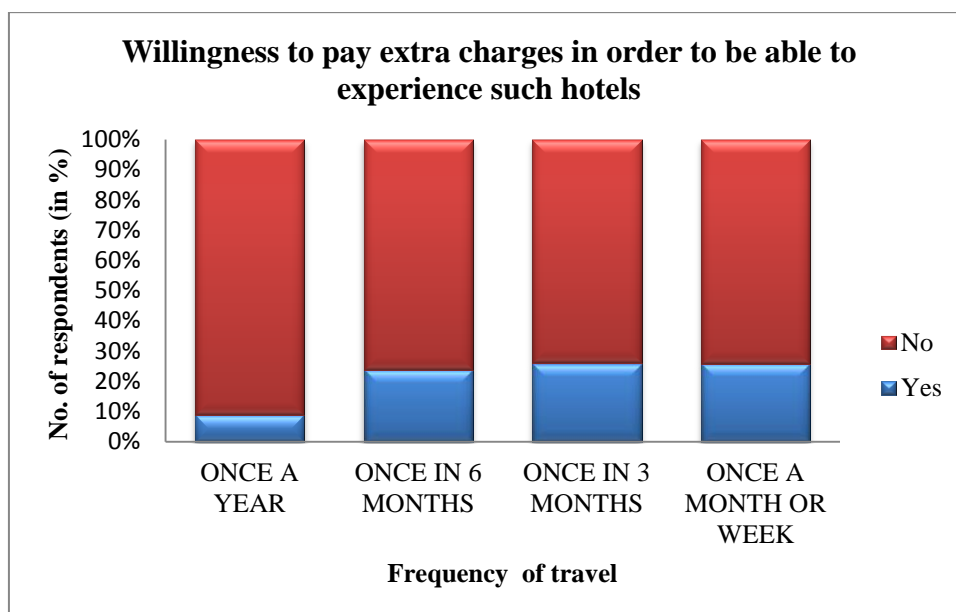
Table 4-80.

To test the association between the Frequency of travel of the respondent and their willingness to pay extra charges in order to be able to experience such hotels, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Frequency of travel	Willingness to pay extra charges in order to be able to experience such hotels				p-value
	Yes	percentage	No	percentage	
ONCE A YEAR	7	8.86	72	91.14	0.019*
ONCE IN 6 MONTHS	31	23.85	99	76.15	
ONCE IN 3 MONTHS	27	25.96	77	74.04	
ONCE A MONTH OR WEEK	23	25.84	66	74.16	

Chi-square test for independence of attributes, *: Significant association



Conclusion

Willingness of respondents to pay extra charges in order to be able to experience green hotels is related to the frequency of travel of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that of the total respondents who were willing to pay extra charges in order to be able to stay in green hotels, 8.86 % respondents travelled once a year, 23.85 % respondents travelled once in six months, 25.96 % respondents travelled once in three months, 25.84% travelled once a month or week.

So, it can be said that respondents who travel less frequently are not as willing to pay extra charges in order to be able to stay in green hotels as compared to those respondents that travelled once in a week or month, three months, or six months.

4.4.5.3. ASSOCIATION OF VARIABLE ‘PURPOSE OF TRAVEL’ WITH OTHER VARIABLES

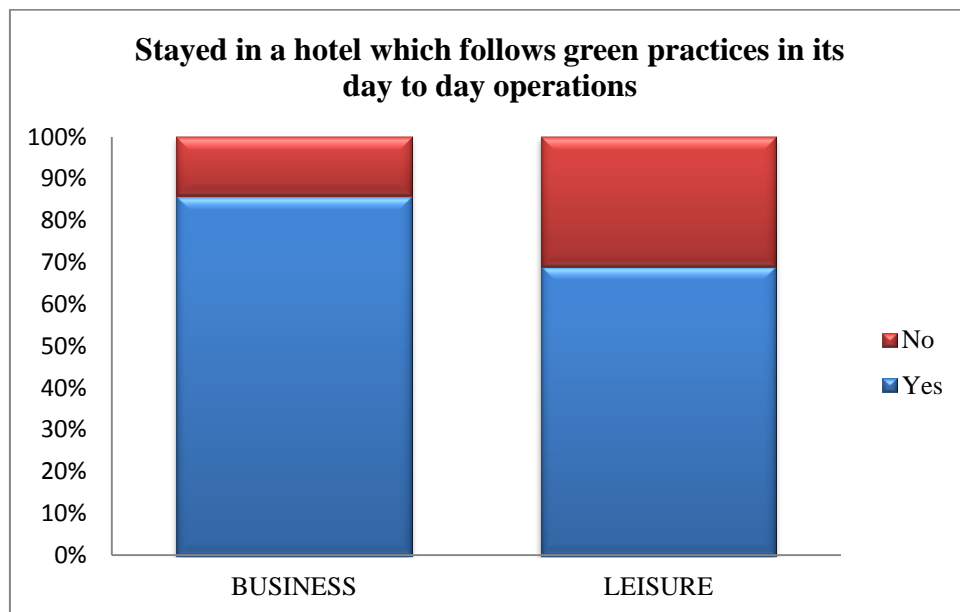
Table 4-81.

To test the association between the Purpose of travel of the respondent and if they have stayed in a hotel which follows green practices in its day to day operations, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Reason for travel	Stayed in a hotel which follows green practices in its day to day operations				p-value
	Yes	percentage	No	percentage	
BUSINESS	230	84.25	38	13.92	0.000**
LEISURE	89	68.99	40	31.01	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether the respondent has stayed in a hotel which follows green practices is related to the purpose of travel of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that of the total respondents, 84.25% of business travellers have stayed in a hotel which follows green practices, while only 68.99% of leisure travellers have stayed in a hotel which follows green practices.

So, it can be said that respondents who travel for the purpose of business are more likely to have stayed in a hotel which follows green practices as compared to those respondents who have travelled for leisure.

Table 4-82.

To test the association between the Purpose of travel of the respondent and their participation in green practices undertaken by hotel, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Reason for travel	Participated in green initiatives undertaken by the hotel				p-value
	Yes	percentage	No	percentage	
BUSINESS	142	52.01	131	47.99	0.045*
LEISURE	42	32.56	87	67.44	

Chi-square test for independence of attributes, *: Significant association



Conclusion

Whether the respondent is participating in green initiatives carried out in hotels is related to the purpose of travel of the respondent. (as $p\text{-value} < 0.05$).

As per the analysis and interpretation of data, it is seen that out of the total respondents, 52.01% of the business travellers (more than half the respondents) have participated in green initiatives carried out in hotels, as compared to only 32.56% to the leisure travellers.

So, it can be said that business travellers participate more in green initiatives carried out in hotels, as compared to leisure travellers.

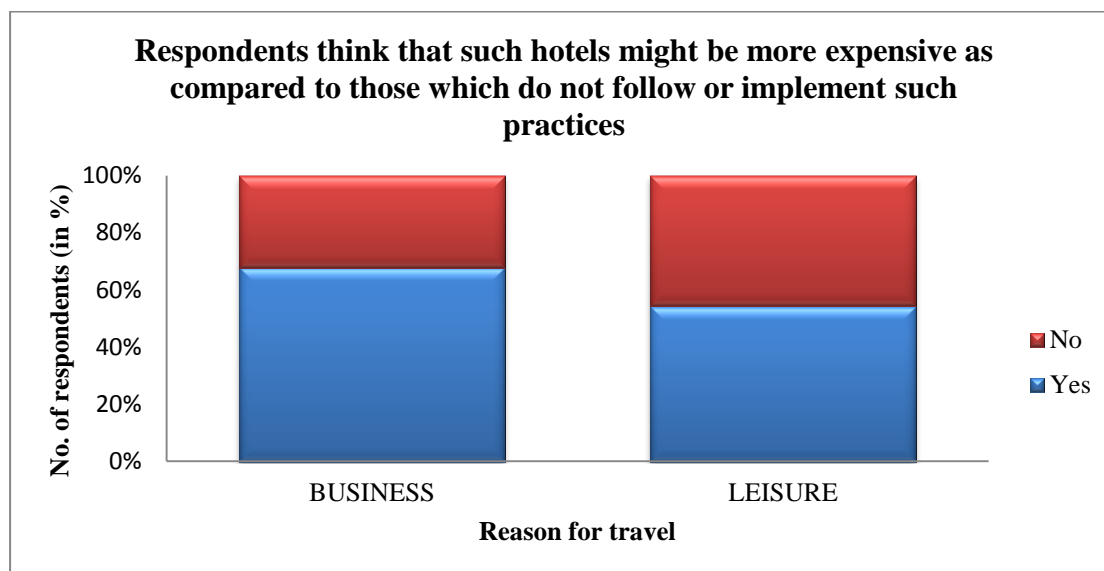
Table 4-83.

To test the association between the Purpose of travel of the respondent and whether they think that such hotels are more expensive as compared to those hotels which do not follow or implement green practices, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Reason for travel	Respondents think that such hotels might be more expensive as compared to those which do not follow or implement such practices				p-value
	Yes	percentage	No	percentage	
BUSINESS	185	67.77	88	32.23	0.009**
LEISURE	70	54.26	59	45.74	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether the respondents feel that green hotels are expensive is related to the purpose of travel of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is seen that out of the total respondents, 67.77% of business travellers feel that green hotels are expensive, as compared to 54.26% of leisure travellers.

So it can be said that more business travellers feel that green hotels are expensive, as compared to leisure travellers.

4.4.5.4. ASSOCIATION OF VARIABLE ‘HIGHEST EDUCATIONAL QUALIFICATION’ WITH OTHER VARIABLES

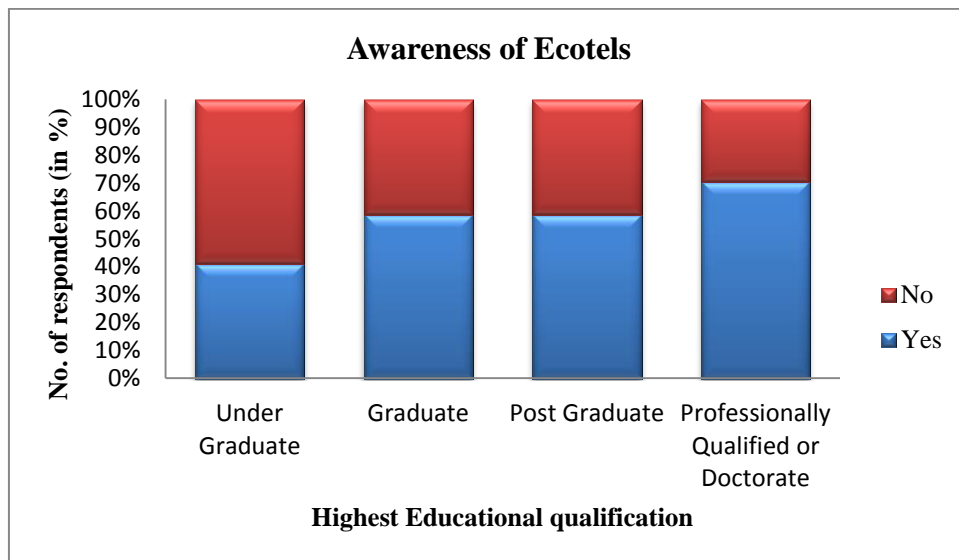
Table 4-84.

To test the association between the Highest educational qualification of the respondent and awareness of Ecotels, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Highest Educational qualification	Awareness of Ecotels				p-value
	Yes	percentage	No	percentage	
Under Graduate	7	41.18	10	58.82	0.035*
Graduate	71	58.68	50	41.32	
Post Graduate	75	58.59	53	41.41	
Professionally Qualified or Doctorate	96	70.59	40	29.41	

Chi-square test for independence of attributes, *: Significant association



Conclusion

Awareness of Ecotels is dependent on Highest educational qualifications of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that less than half the undergraduates (41.18 %) were found to be aware of Ecotels. More than half (58.68 %) of the graduates were aware of Ecotels, more than half (58.59%) of the post-graduates were aware of Ecotels. Maximum (70.59%) of the professionally qualified/doctorate respondents were aware of Ecotels.

So, it can be said that awareness about Ecotels is related to the educational qualification of the respondents, highly qualified respondents are found to be more aware of Ecotels as compared to the others.

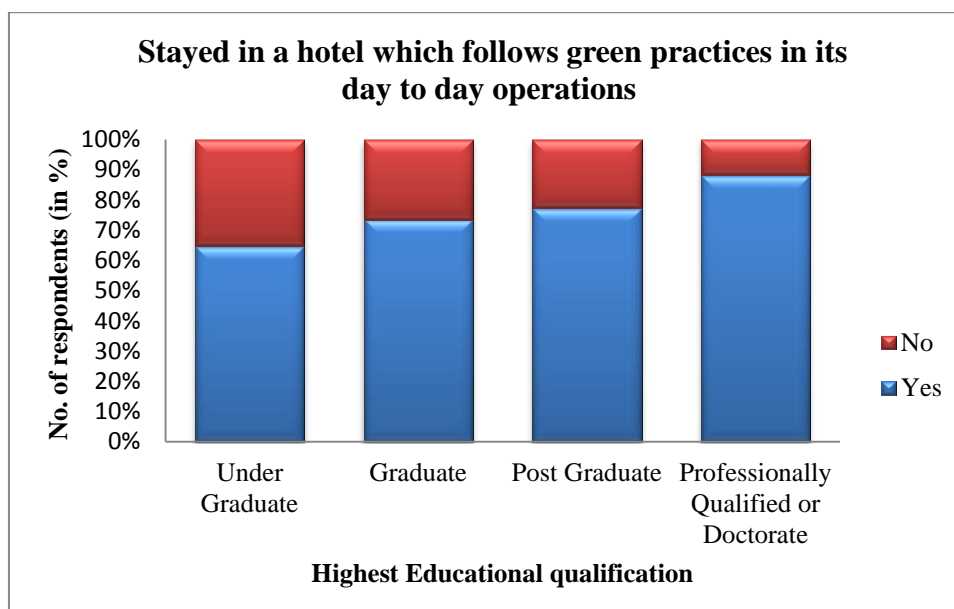
Table 4-85.

To test the association between the Highest educational qualification of the respondent and whether they have stayed at a hotel which follows green practices in its day to day operations, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Highest Educational qualification	Stayed in a hotel which follows green practices in its day to day operations				p-value
	Yes	percentage	No	percentage	
Under Graduate	11	64.71	6	35.29	0.009**
Graduate	89	73.55	32	26.45	
Post Graduate	99	77.34	29	22.66	
Professionally Qualified or Doctorate	120	88.24	16	11.76	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether guests have stayed in hotels which follow green practices depends on Highest educational qualifications of the respondent. (as $p\text{-value} < 0.05$).

As per the analysis and interpretation of data, it is found that majority of the professionally qualified/doctorate respondents (88.24%) have stayed in hotels which follow green practices. 77.34% post graduate respondents, 73.55% graduates and 64.71% of the undergraduate respondents have stayed at hotels which follow green practices.

So, it can be said that whether guests have stayed at green hotels is related to the educational qualification of the respondents, more highly qualified respondents are found to have stayed at green hotels as compared to the others.

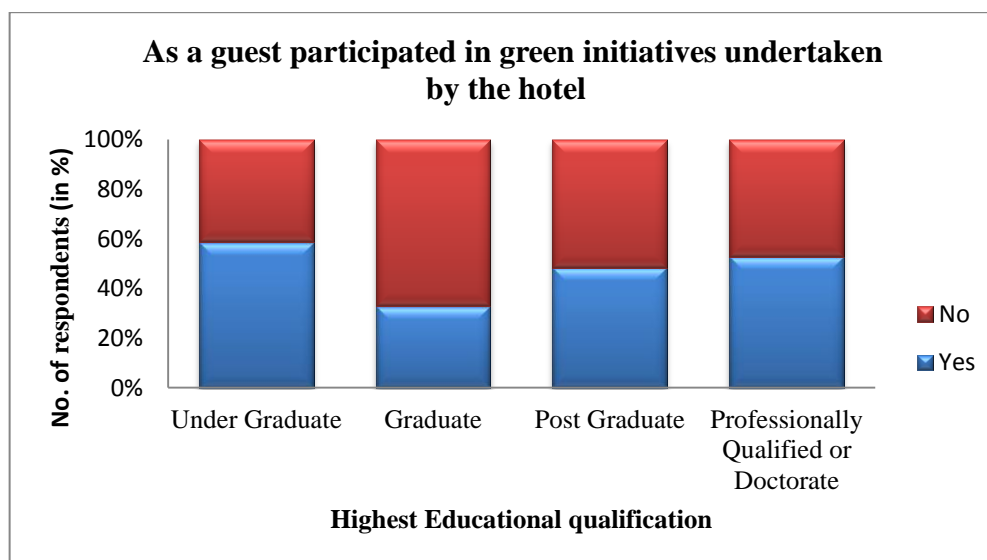
Table 4-86.

To test the association between the Highest educational qualification of the respondent and whether they have participated in green initiatives undertaken by the hotel they were staying in, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Highest Educational qualification	As a guest participated in green initiatives undertaken by the hotel				p-value
	Yes	percentage	No	percentage	
Under Graduate	10	58.82	7	41.18	0.007**
Graduate	40	33.06	81	66.94	
Post Graduate	62	48.44	66	51.56	
Professionally Qualified or Doctorate	72	52.94	64	47.06	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents have participated in green initiatives undertaken by the hotel depends on Highest educational qualifications of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that hardly one third of the (33.06%) of the graduate respondents have participated in green initiatives undertaken by the hotel they were staying in. 58.82% under graduates and 52.94% professionally qualified/doctorate respondents. Slightly less than half the post graduate respondents (48.44%) have participated in green initiatives undertaken by the hotel that they were staying in.

So, it can be said that overall half the guests across all categories have participated in green initiatives undertaken by the hotel that they were staying in.

In fact, it is seen that more undergraduates (58.82%) have participated in green initiatives undertaken by the hotel that they were staying in, some of which were students.

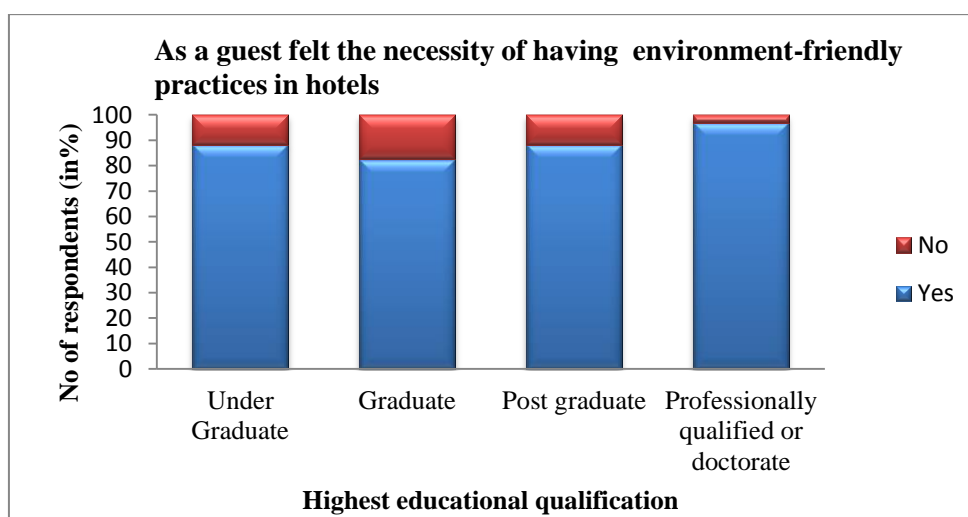
Table 4-87.

To test the association between the Highest educational qualification of the respondent and whether they have felt the need to have environment-friendly practices in hotels, we used Chi-square test for independence of environment-friendly practices in the hotel; we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Highest Educational qualification	Feel the necessity of having environment-friendly practices in hotels				p-value
	Yes	percentage	No	percentage	
Under Graduate	15	88.24	2	11.76	0.002**
Graduate	100	82.64	21	17.36	
Post Graduate	113	88.28	15	11.72	
Professionally Qualified or Doctorate	132	97.06	4	2.94	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents feel the necessity of having environment-friendly practices in

the hotel depends on Highest educational qualifications of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that 97.06% of the Professionally qualified or Doctorate respondents felt the necessity of having environment-friendly practices in the hotel. 88.28% of the Post graduates felt the necessity of having environment-friendly practices in the hotel. This is followed by 88.24% of the undergraduates, some of which are students. 82.64% of the Graduates felt the necessity of having environment-friendly practices in the hotel.

So it can be said that whether respondents feel the necessity of having environment-friendly practices in the hotel depends on their Highest educational qualification. Undergraduates show a slightly higher percentage as compared to graduates, some of the respondents of this category are still students.

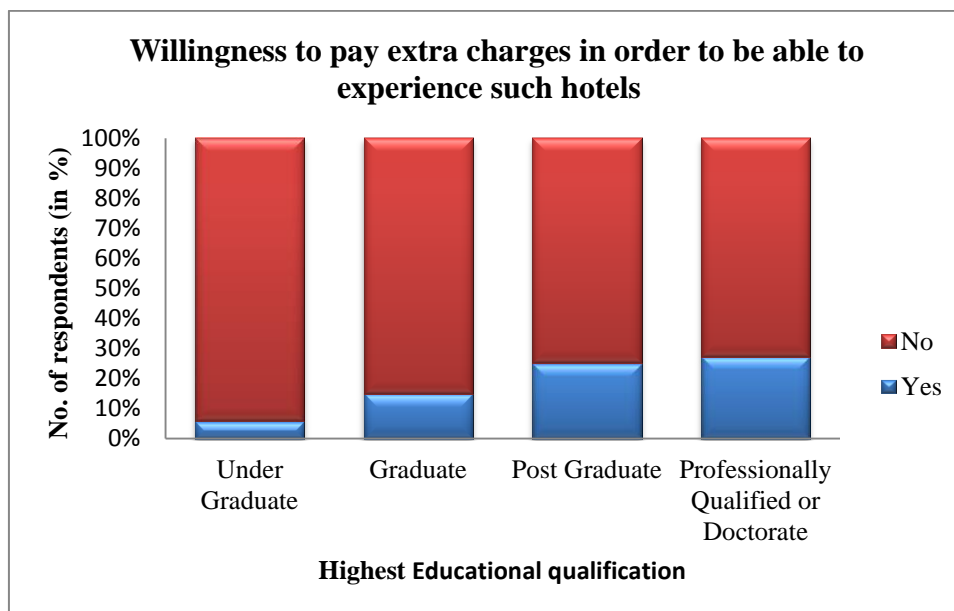
Table 4-88.

To test the association between the Highest educational qualification of the respondent and such hotels, their willingness to pay extra charges in order to experience such hotels, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Highest Educational qualification	Willingness to pay extra charges in order to be able to experience such hotels				p-value
	Yes	percentage	No	percentage	
Under Graduate	1	5.88	16	94.12	0.029*
Graduate	18	14.88	103	85.12	
Post Graduate	32	25.00	96	75.00	
Professionally Qualified or Doctorate	37	27.21	99	72.79	

Chi-square test for independence of attributes, *: Significant association



Conclusion

Whether respondents are willing to pay extra charges in order to be able to stay in such hotels depends on Highest educational qualifications of the respondent. (as p-value < 0.05).

As per the analysis and interpretation of data, it is found that less than one third of the respondents from all the categories were ready to pay extra charges in order to be able to stay in green hotels- 27.21% professionally qualified or doctorate, 25% of post-graduates, 14.88% graduates and 5.88% of under graduates.

So overall it can be said that very few respondents from all categories are willing to pay extra charges in order to be able to stay in such hotels, least amongst them the undergraduate respondents.

4.4.5.5. ASSOCIATION OF MISCELLANEOUS VARIABLES WITH OTHER VARIABLES

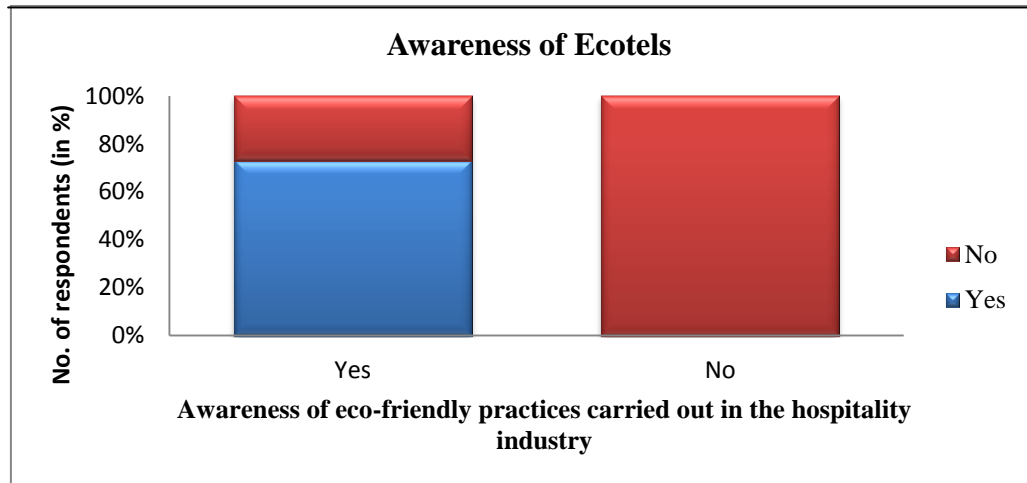
Table 4-89.

To test the association between the awareness of eco-friendly practices and awareness of Ecotels amongst the respondents, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Awareness of eco-friendly practices carried out in the hospitality industry	Awareness of Ecotels				p-value
	Yes	percentage	No	percentage	
Yes	249	73.02	92	26.98	0.000**
No	0	0.00	61	100.00	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents are aware of Ecotels depends on their awareness of eco-friendly practices carried out in the hospitality industry. (as p-value < 0.05).

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels are aware of Ecotels.

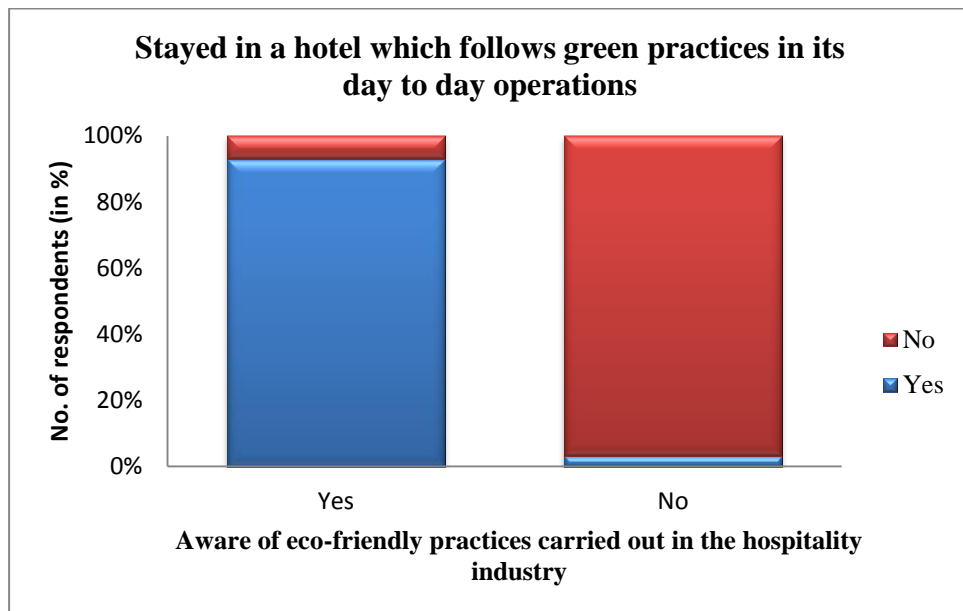
Table 4-90.

To test the association between the awareness of eco-friendly practices and whether the respondents had stayed at a hotel which follows green practices in its day to day operations, we used Chi-square test for independence of attributes.

Following is the table of significance of the test-

Aware of eco-friendly practices carried out in the hospitality industry	Stayed in a hotel which follows green practices in its day to day operations				p-value
	Yes	percentage	No	percentage	
Yes	317	92.96	24	7.04	0.000**
No	2	3.28	59	96.72	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents had stayed at a hotel which follows green practices in its day to day operations depends on their awareness of eco-friendly practices carried out in the hospitality industry. (as p-value < 0.05).

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels can say that they have stayed at a hotel which follows green practices.

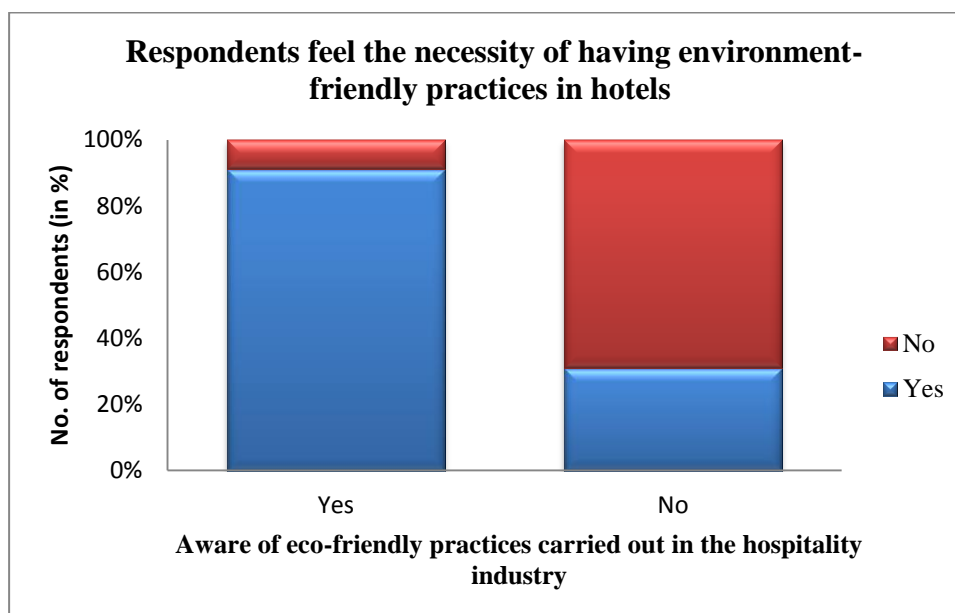
Table 4-91.

To test the association between the awareness of eco-friendly practices and whether the respondents feel the necessity of having environment-friendly practices in hotels, we used Chi-square test for independence of attributes

Following is the table of significance of the test-

Aware of eco-friendly practices carried out in the hospitality industry	Respondents feel the necessity of having environment-friendly practices in hotels				p-value
	Yes	percentage	No	percentage	
Yes	328	96.19	13	3.81	0.000**
No	32	52.46	29	47.54	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether the respondents feel the necessity of having environment-friendly practices in hotels depends on their awareness of eco-friendly practices carried out in the hospitality industry. (as p-value < 0.05).

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels feel the necessity of having environment-friendly practices in hotels.

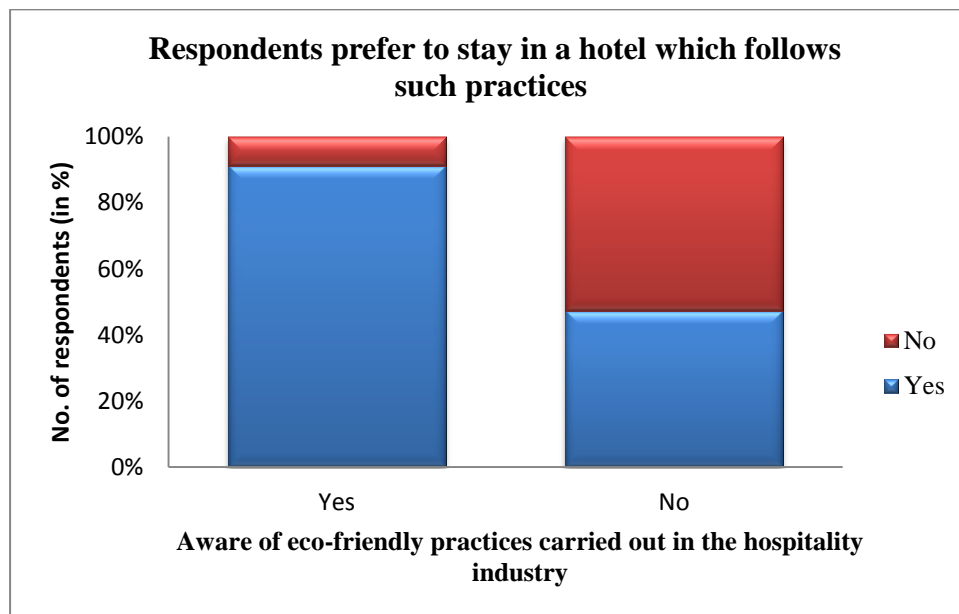
Table 4-92.

To test the association between the awareness of eco-friendly practices and whether respondents prefer to stay in a hotel which follows such practices we used Chi-square test for independence of attributes

Following is the table of significance of the test-

Aware of eco-friendly practices carried out in the hospitality industry	Respondents prefer to stay in a hotel which follows such practices				p-value
	Yes	percentage	No	percentage	
Yes	313	91.79	28	8.21	0.000**
No	30	49.18	31	50.82	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents prefer to stay in a hotel which follows eco-friendly practices depends on their awareness of eco-friendly practices carried out in the hospitality industry. (as p-value < 0.05).

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels prefer to stay in a hotel which follows such practices.

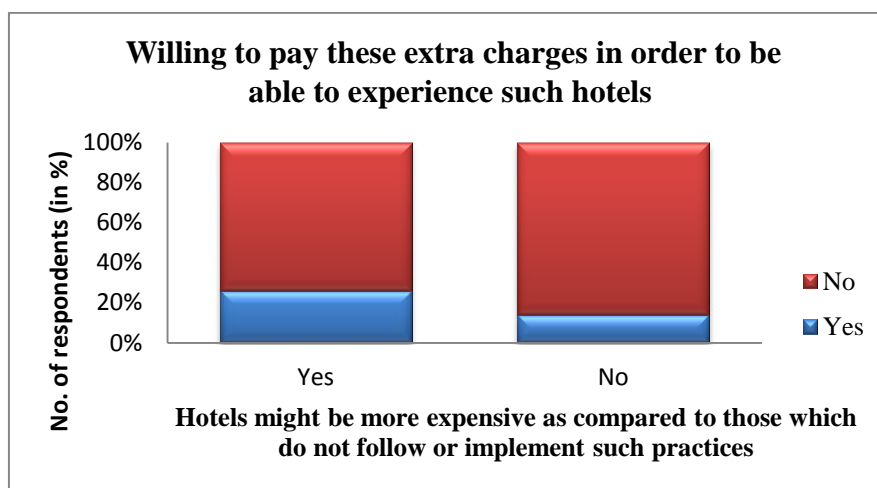
Table 4-93.

To test the association between whether respondents think that such hotels might be more expensive as compared to those which do not follow or implement such practices and if they are willing to pay extra charges in order to be able to experience such hotels we used Chi-square test for independence of attributes

Following is the table of significance of the test-

Respondents think that such hotels might be more expensive as compared to those which do not follow or implement such practices	Willing to pay extra charges in order to be able to experience such hotels				p-value
	Yes	percentage	No	percentage	
Yes	67	26.27	188	73.73	0.000**
No	21	14.29	126	85.71	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents are willing to pay extra charges in order to be able to experience such hotels depends on whether respondents think that such hotels might be more expensive as compared to those which do not follow or implement such practices. (as p-value < 0.05).

After analysis and interpretation of the data, it is found that those respondents who think that such hotels might be more expensive as compared to those which do not follow or implement such practices are not willing to pay extra charges in order to be able to experience such hotels.

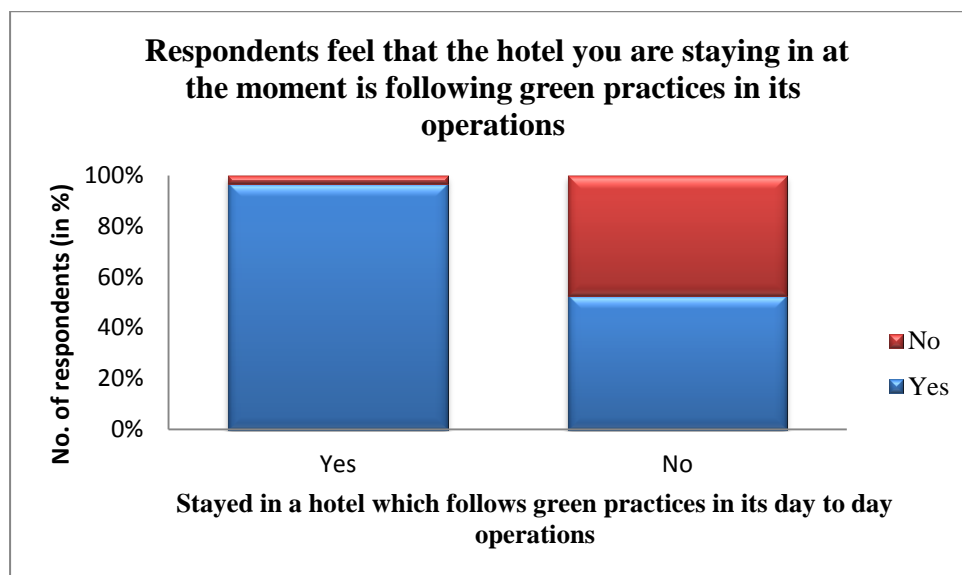
Table 4-94.

To test the association between whether respondents stayed in a hotel which follows green practices in its day to day operations and if they feel that the hotel they are staying in at the moment is following green practices in its operations we used Chi-square test for independence of attributes

Following is the table of significance of the test-

Stayed in a hotel which follows green practices in its day to day operations	Respondents feel that the hotel you are staying in at the moment is following green practices in its operations				p-value
	Yes	percentage	No	percentage	
Yes	236	73.98	83	26.02	0.000**
No	8	9.64	75	90.36	

Chi-square test for independence of attributes, **: Highly Significant association



Conclusion

Whether respondents feel that the hotel they are staying in at the moment is following green practices in its operations depends on whether respondents have stayed in a hotel which follows green practices in its day to day operations. (as p-value < 0.05).

After analysis and interpretation of the data, it is found that only those respondents who have earlier stayed in a hotel which follows green practices in its day to day operations can judge whether the hotel they are staying in at the moment is following green practices.

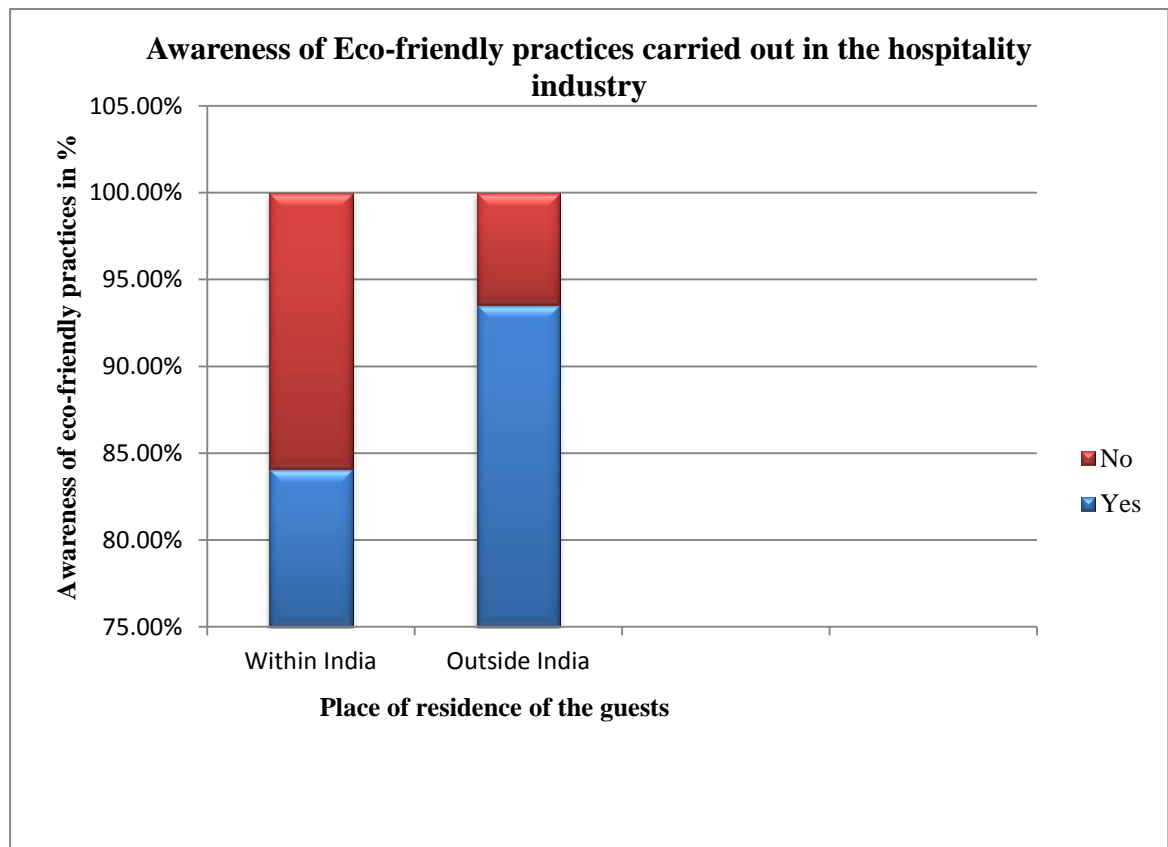
Table 4.95

To test the association between the awareness of eco-friendly practices and place of residence of the respondents, we used Chi-square test for independence of attributes

Following is the table of significance of the test-

Place of residence of respondents	Awareness of eco-friendly practices carried out in the hospitality industry				p-value
	Yes	percentage	No	percentage	
Within India	312	84.09	59	15.90	0.029*
Outside India	29	93.54	2	6.45	

Chi-square test for independence of attributes, *: Significant association



Conclusion

Whether respondents are aware of eco-friendly practices depends on place of residence of the respondents, (as p-value < 0.05).

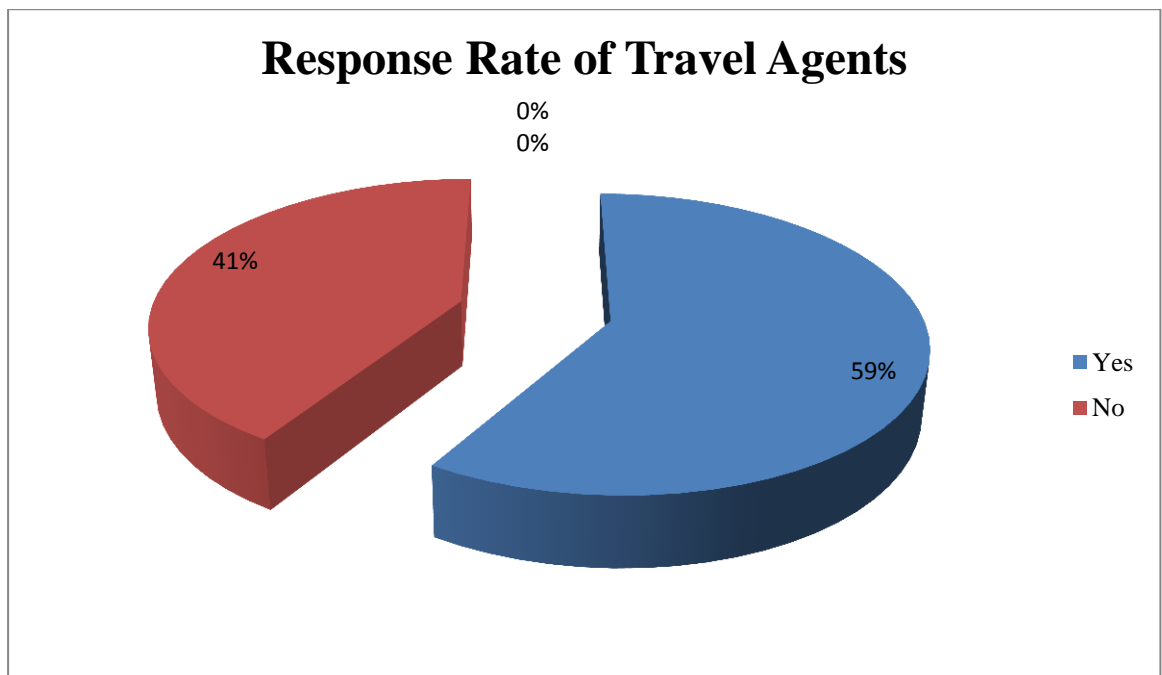
After analysis and interpretation of the data, it is found that more respondents from outside India (93.54%) are aware of eco-friendly practices followed in the hospitality industry as compared to those respondents from India (84.09%).

4.5 TRAVEL AGENCY QUESTIONNAIRES

4.5.1 RESPONSE RATE

Out of the 34 questionnaires that were administered to organized and unorganized travel agencies in Pune, twenty (20) constituting 58.82% Response rate were collected.

Table 4-96. RESPONSE RATE OF TRAVEL AGENTS

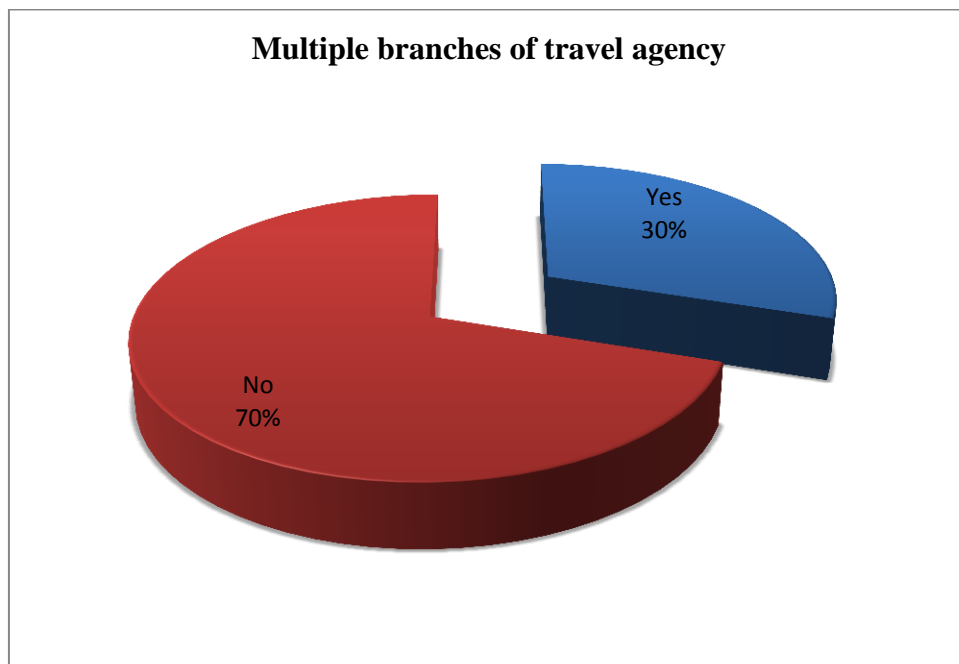


4.5.2 ORGANIZATION OF FINDINGS

The study findings were grouped, analyzed and presented in the form of tables and their corresponding graphs.

Table 4-97. Multiple branches of Travel agency

Multiple branches	Frequency	Percentage
Yes	6	30
No	14	70

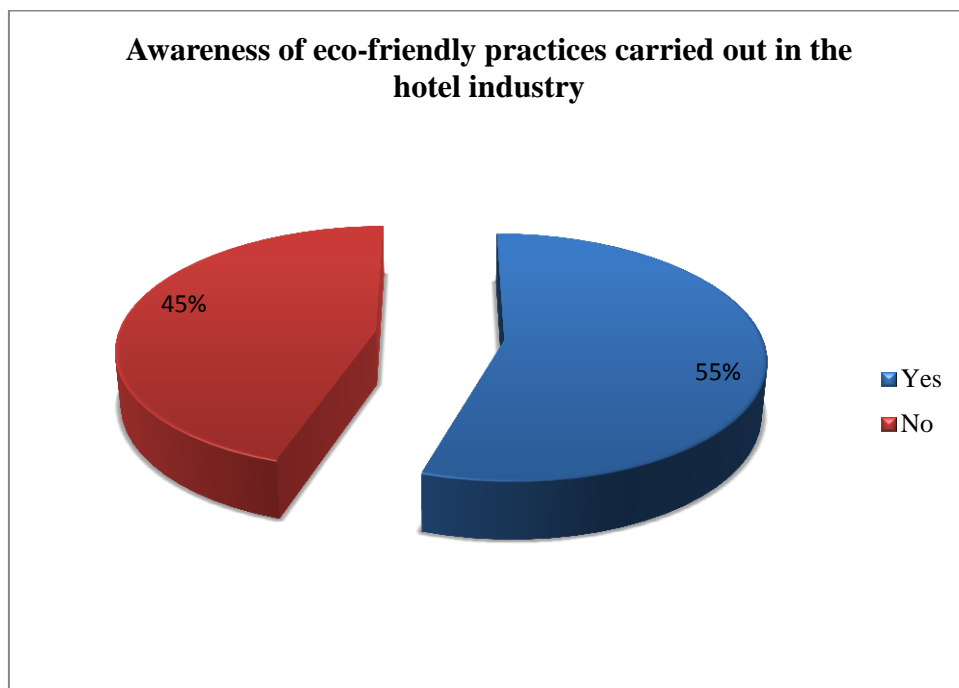


Explanation

From the above mentioned table, it can be seen that 30% of the travel agencies had multiple branches, while 70 % did not.

Table 4-98. Awareness of eco-friendly practices carried out in the hospitality industry

Awareness of eco-friendly practices carried out in the hospitality industry	Frequency	Percentage
Yes	11	55
No	9	45

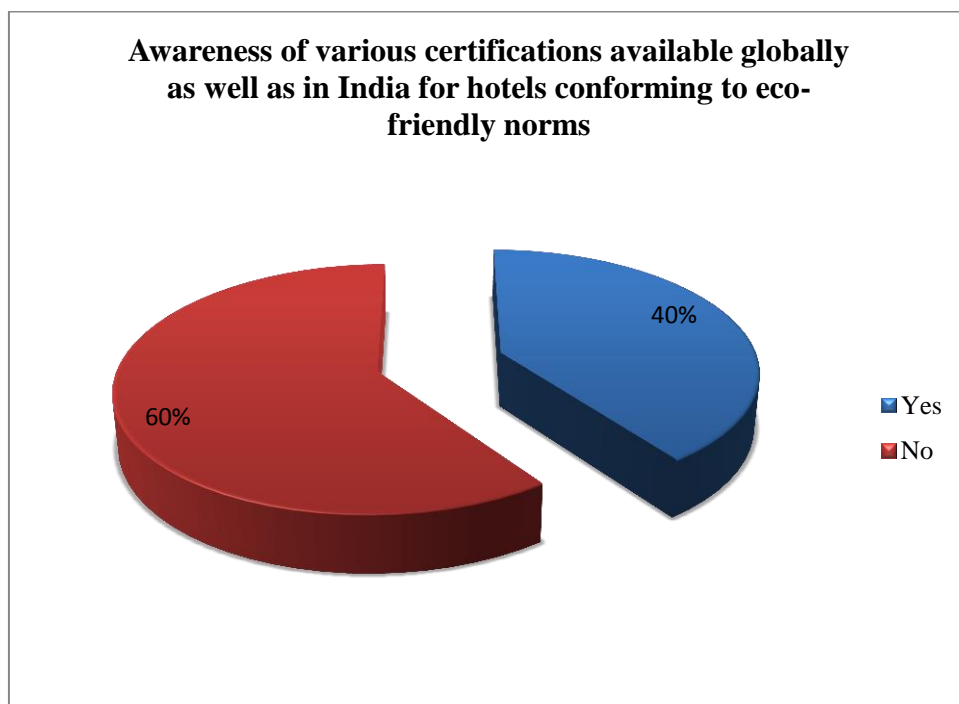


Explanation

From the above mentioned table, it can be seen that 55% of the travel agencies surveyed were aware of eco-friendly practices carried out in the hotel industry, 45% of those surveyed were not aware of eco-friendly practices carried in the hotel industry.

Table 4-99. Awareness of various certifications available globally as well as in India for hotels conforming to eco-friendly norms

Awareness of various certifications	Frequency	Percentage
Yes	8	40
No	12	60

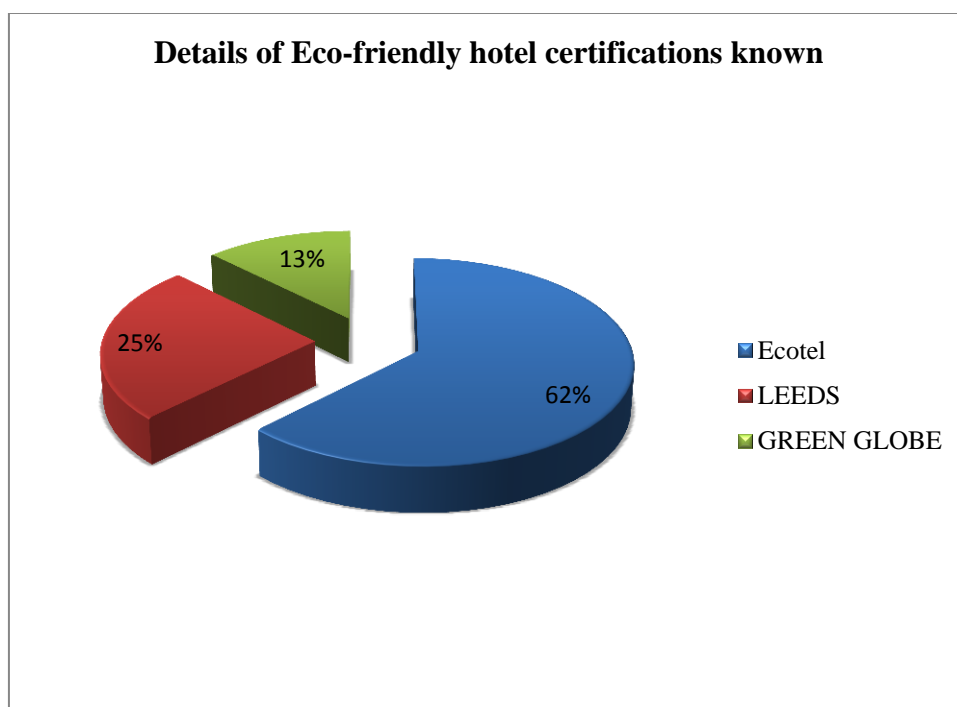


Explanation

From the above mentioned table, it can be seen that 40% of the travel agencies surveyed were aware of certifications for eco-friendly norms available globally and in India for hotels, 60% of those surveyed were not aware of these certifications.

Table 4-100. Details of Eco-friendly hotel certifications known

Details of eco-friendly hotel certifications known	Frequency	Percentage
Ecotel	5	62.5
LEEDS	2	25
Green Globe	1	12.5



Explanation

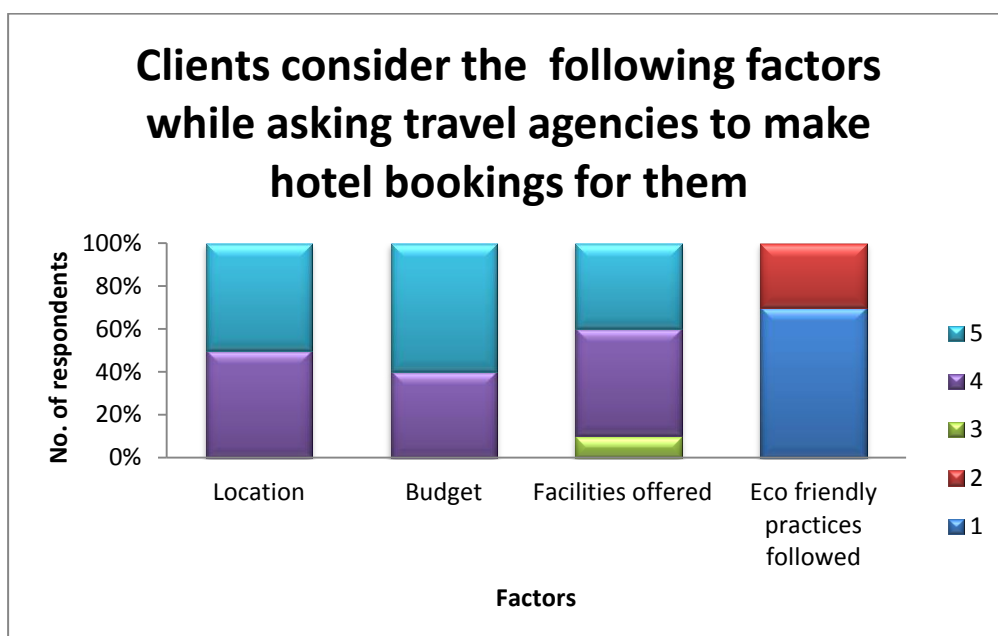
From the above mentioned table, it can be seen that out of 40% travel agencies that were aware of certifications for hotels for conformance with eco-friendly norms, 62.5% were aware of the Ecotel certification, 25% were aware of LEEDS certification, while 12.5% were aware of Green Globe certification.

Clients consider the following factors while asking travel agencies to make hotel bookings for them-Rate them from 1 to 5, with 1 being the least & 5 being the maximum value –

Table 4-101. Factors considered by clients while making hotel bookings

Sr. No	Factors	Frequency					Percentage				
		1	2	3	4	5	1	2	3	4	5
i.	Location	0	0	0	10	10	0	0	0	50	50
ii.	Budget	0	0	0	8	12	0	0	0	40	60
iii.	Facilities offered	0	0	2	10	8	0	0	10	50	40
iv.	Eco friendly practices followed	14	6	0	0	0	70	30	0	0	0

1 being the least & 5 being the maximum value



Explanation

Location

From the table above it is seen that out of all the respondents surveyed, Location was rated at 5 by 50% of the respondents, while 50% rated it at 4. No respondent rated it at 3, 2 or 1.

Budget

From the table above it is seen that out of all the respondents surveyed, Budget was rated at 5 by a majority (60%) of the respondents, while 40% rated it at 4. No respondent rated it at 3, 2 or 1.

Facilities Offered

From the table above it is seen that out of all the respondents surveyed, Facilities offered was rated at 5 by 40% of the respondents, while 50% rated it at 4. 10% rated it at 3. No respondent rated it at 2 or 1.

Eco friendly practices followed

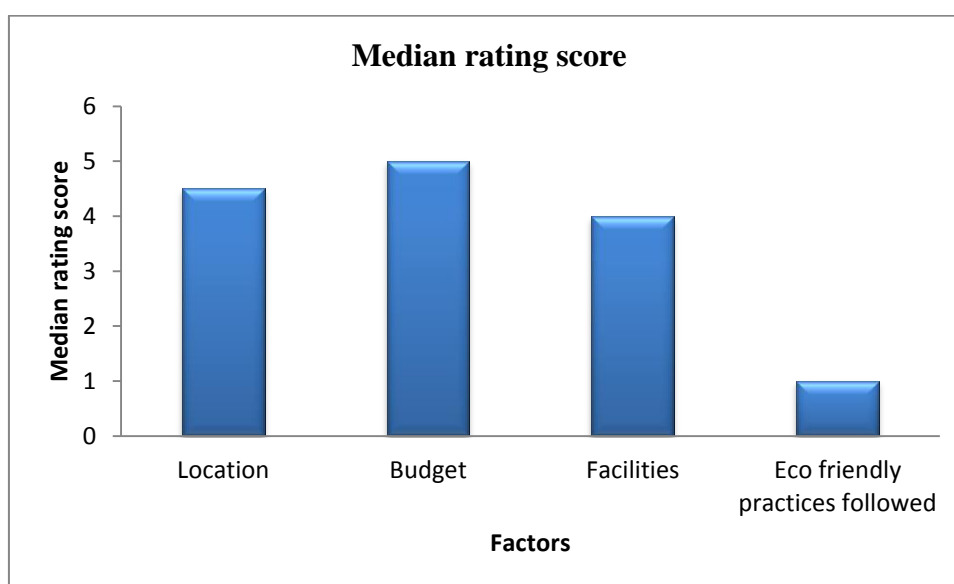
From the table above it is seen that out of all the respondents surveyed, Eco friendly practices followed was rated at 2 by 30% of the respondents, while 70% rated it at 1. No respondent rated it at 5, 4 or 3.

KRUSKAL-WALLIS TEST

Table 4-102. Kruskal-Wallis test rating score of the factors considered by clients while asking travel agents to make hotel bookings for them

Variable	SD	Median	H value	p-value
Location	0.51	4.5	45.45	0.00**
Budget	0.50	5		
Facilities	0.66	4		
Eco friendly practices followed	0.47	1		

Kruskal-Wallis Test, **: Highly significant



Explanation

The above chart explains the Median rating of the factors considered by clients while asking travel agents to make hotel bookings for them. The Standard Deviation is also mentioned.

Location

The Median rating of the respondents for Location is 4.5 with a Standard Deviation of 0.51.

Budget

The Median rating of the respondents for Budget is 5 with a Standard Deviation of 0.50.

Facilities Offered

The Median rating of the respondents for Facilities offered is 4 with a Standard Deviation of 0.66.

Eco friendly practices followed

The Median rating of the respondents for Facilities offered is 1 with a Standard Deviation of 0.47.

The Median rating is the lowest for Eco Friendly Practices followed (1) and highest for Budget (5).

So we conclude that most of the respondents state their client preference while selecting hotels the highest for Budget with a Median rating of 5, while very few prefer Eco friendly practices followed with the lowest median rating of 1.

Conclusion

The Kruskal-Wallis statistic for the data is **45.45** and the p-value is **0.000**. Because the p-value is very very small (less than the common α -level of 0.05), the test is highly significant. Thus, we can conclude that the Median rating of the factors considered by clients while asking travel agents to make hotel bookings for them is different.

Most of the clients give importance to the location, budget or facilities offered while very few give importance to the Eco friendly practices followed.

Table 4-103. Number of clients asking for eco-friendly hotel bookings per month

Client request for eco-friendly hotels per month	Frequency	Percentage
Less than 5 bookings	16	80
5 to 10 bookings	4	20
More than 10 bookings	0	0

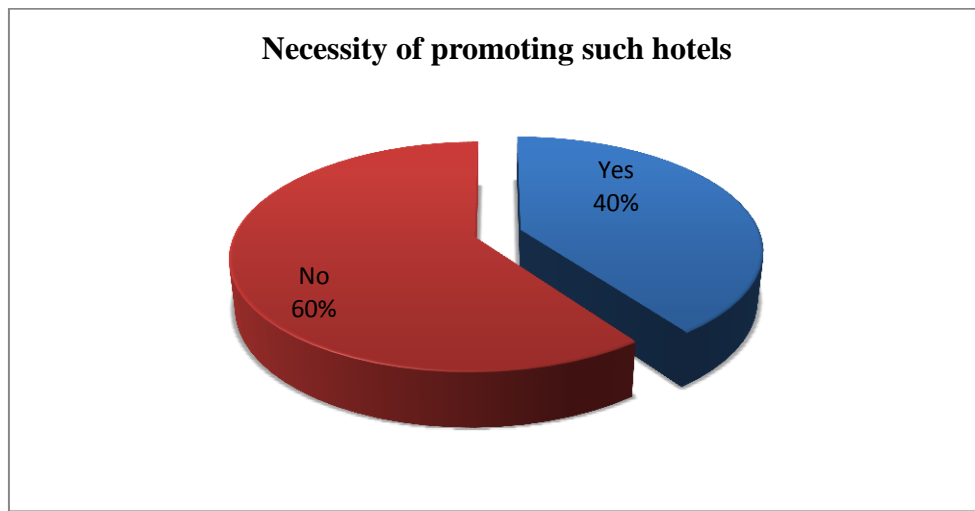


Explanation

From the above mentioned table, it can be seen that majority of the respondents (80%) that there are less than 5 bookings by clients specifically for eco-friendly hotels each month. 20% of the respondents said that there are 5 to 10 requests for bookings for eco-friendly hotels each month. However, none of the respondents had more than 10 bookings for eco-friendly hotels in a month.

Table 4-104. Necessity of promoting such hotels

Necessity of promoting such hotels	Frequency	Percentage
Yes	8	40
No	12	60

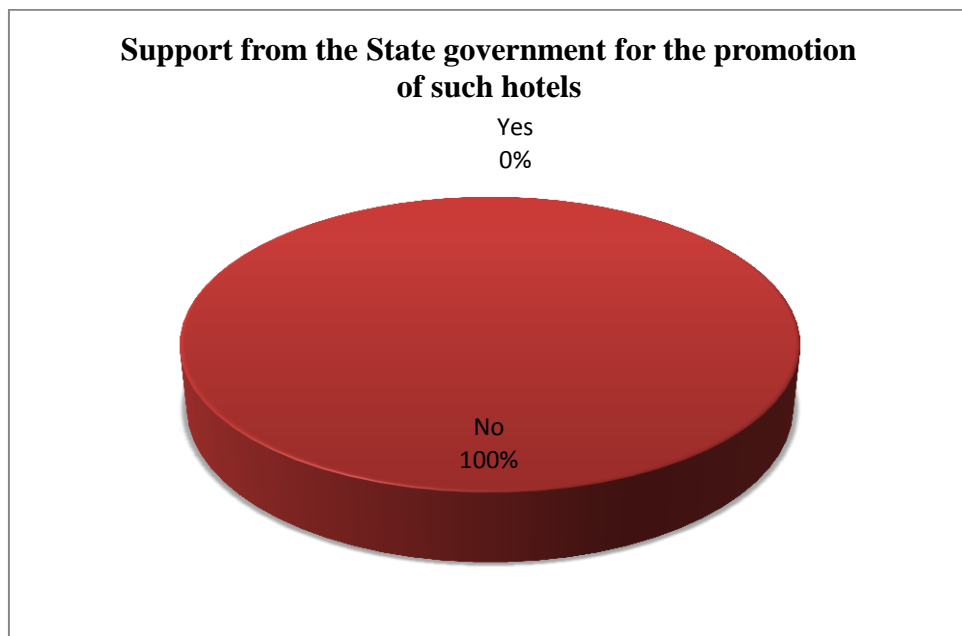


Explanation

From the above mentioned table, it can be seen that majority of the respondents (60%) did not find it necessary to promote eco-friendly hotels; while the remaining (40%) thought it was necessary to promote hotels following eco-friendly practices.

Table 4-105. Support from the State government for the promotion of such hotels

Support from the State government for the promotion of such hotels	Frequency	Percentage
Yes	0	0
No	20	100



Explanation

From the above mentioned table, it can be seen that 100% of the respondents said that there is no support from the State government for the promotion of such hotels.

CHAPTER 5

FINDINGS, SUGGESTIONS AND RECOMMENDATIONS

5.1. Introduction

5.2. Findings from Hotels

5.2.1. Findings of the hotel data interpretation

5.2.2. Various green practices carried out at the hotels surveyed

5.3. Findings from Guests

5.3.1. Findings of the guest data interpretation

5.4. Findings from Travel agencies

5.5. Suggestions and recommendations

5.1. INTRODUCTION

After the interpretation of data using different tests and associations to prove/disprove the hypotheses, there were certain findings recorded. Also, there were a few suggestions that could be implemented after this research.

5.2. FINDINGS FROM HOTELS

After data analysis of the Hotel questionnaires and carrying out association tests, the data was interpreted. The findings of the Hotel data interpretation are listed out below-

5.2.1. FINDINGS OF THE HOTEL DATA INTERPRETATION

1. Whether the hotel is a part of any chain is related to if the hotel has a written policy document on green practices

More of the chain hotels (48.39%) have a written policy document as compared to the independent hotels (20%).

51.61% of the chain hotels do not have a written policy document on green practices, while 80% of the independent ones do not have it.

So it can be said that having a written policy document is dependent on whether the hotel is a part of any chain, since chain hotels tend to have more systems in place, as policies and procedures need to be uniform across all the properties belonging to that particular chain.

2. Whether the hotel is a part of any chain is related to if the hotel groups have specific programme for implementation of green practices in the hotels

54.84% of chain hotels have specific programmes for implementation of green practices in the hotels, while 75% of the independent hotels have specific programmes for implementation of green practices in the hotels.

45.16% of chain hotels do not have specific programmes for implementation of green practices in the hotels, while 25% of the independent hotels do not have specific programmes for implementation of green practices in the hotels.

So, it can be said that there is a relation between whether the hotel is a part of any chain and if the hotel groups have specific programme for implementation of green practices in the hotels, independent hotels have more specific programmes as compared to chain hotels.

3. Whether the hotel is a part of any chain is related to if the overall performance of the hotel has consistently improved due to the implementation of green practices

After analysis and interpretation of data, it is seen that 70.97% of the chain hotels have said that the overall performance of the hotel has consistently improved due to the implementation of green practices, 19.35% have said no, while 9.68% have responded as not really.

50% of the independent hotels have said that the overall performance of the hotel has consistently improved due to the implementation of green practices, 5% have said no, while 45% have responded as not really.

So, it can be said that there is a relation between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices, as more chain hotels say that there said that the overall performance of the hotel has consistently improved due to the implementation of green practices as compared to independent ones.

4. Whether the hotel is a part of any chain is related to if the overall performance of the hotel has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past 3 years

After analysis and interpretation of data, it can be seen that 87.10% of the chain hotels said that there is an improvement, while 12.90% said that there is no improvement in overall performance.

60% of the independent hotels said that said that there is an improvement in the overall performance, while 40% said that there is no improvement in overall performance.

So, it can be said that there is a relation between whether the hotel is a part of any chain and if the overall performance of the hotel has consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past 3 years.

More of the chain hotels show improvement as compared to the independent hotels. This is because as said earlier, chain hotels have more structured implementation, in order to have uniformity across all the properties belonging to that chain.

5. Whether guests who consider green hotels as an important factor in booking rooms or venues for banquet functions or meals is related to whether are ready to pay extra for these initiatives

After analysis and interpretation of data, it is seen that 52.94% of the guests who consider green hotels as an important factor in booking rooms or venues for banquet functions or meals are ready to pay extra for these initiatives, while 47.06% are not ready to pay extra.

5.88% of the guests who do not consider green hotels as an important factor in booking rooms or venues for banquet functions are, ready to pay extra while 94.12% are not ready to pay extra.

So, it can be said that only those guests who consider green hotels as an important factor in booking rooms or venues for banquet functions or meals are ready to pay extra for these green initiatives.

Guests who do not consider green hotels as an important factor in booking rooms or venues for banquet functions or meals are not ready to pay extra for these green initiatives.

6. There is an association between year of commencement of operations and awareness about eco-friendly practices carried out in the hospitality industry

After analysis and interpretation of data, is seen that 83.33% of the hotels that commenced operations before the year 2000 are aware about eco-friendly practices carried out in the hospitality industry, while 16.67% are not aware.

On the other hand 100% of the hotels that commenced operations before the year 2000 are aware about eco-friendly practices carried out in the hospitality industry.

So it can be said that hotels that commenced operations after the year 2000, are more aware of eco-friendly practices in the hospitality industry, as compared to those that commenced operations before the year 2000, are more aware of eco-friendly practices in the hospitality industry.

7. There is an association between whether the staff is given some specific training inputs by the hotel regarding implementation of green practices and the year of commencement of operations of the hotel

After analysis and interpretation of data it is seen that 57.58% of the hotels which commenced operations before the year 2000 give specific training inputs to their staff regarding implementation of green practices, 42.42% do not give any specific training inputs.

On the other hand 27.78% of the hotels which commenced operations after the year 2000 give specific training inputs to their staff regarding implementation of green practices, 72.22% do not give any specific training inputs.

So, it can be said that whether the staff is given some specific training inputs by the hotel regarding implementation of these practices is related to year of commencement of operations of the hotel, more hotels which started operations prior to the year 2000 give specific training inputs to their staff regarding implementation of green practices, as compared to the hotels which commenced operation after the year 2000. This is because the newer hotels already have their systems related to implementation of green practices in place.

5.2.2 VARIOUS GREEN PRACTICES CARRIED OUT AT THE HOTELS SURVEYED

Out of the five hotels surveyed, most of the five star and four star category ones were a lot more conscious of green or environment-friendly practices and had specific programmes for promoting green practices in their organizations as compared to the two star ones. Most of them stressed on the importance of involving guests in the implementation of these practices, as that also led increased savings.

Written below are the green practices followed in the 51 hotels surveyed. The names of the hotels have not been mentioned, instead, they have been identified as Hotel no 1, Hotel no 2 and so on.

Hotel No 1 – 5 Star

This hotel undertakes recycling of sewage water, linen reuse, recycling of paper, no bin day in cafeteria to reduce wastage of resources. Energy efficient equipment and devices are installed in the hotel energy efficient lighting system is installed in the hotel. The hotel is certified under LEEDS Gold certification conforming to eco-friendly norms. Earth hour is followed in which guests are involved.

Hotel No 2 - 5 Star

In this hotel the hotel manager is delegated with the responsibility of managing the environment related issues. The hotel uses energy-efficient lights to reduce energy consumption. Proper practices are followed to reduce water and fuel consumption. Guests are involved in implementing green practices by the ways of minimizing the changeover of room linen. Staff of this property undergoes specific training program for reducing energy consumption and cost

Hotel No 3 - 5 Star

Eco- friendly practices are carried out to prevent environment degradation. The hotel recycles the water and waste via biodegradable plants. The Executive housekeeper is responsible for managing environment-related issues. Energy efficient lights are used. A biogas plant is installed; garbage is segregated as well as recycled if possible. Guests are involved in following green practices but no specific training is given to the staff. The hotel takes initiatives to popularize environment-friendly ways through web promotion.

Hotel No 4 - 5 Star

The Housekeeping Manager is in charge of managing environmental related issues. The hotel is aware of all the eco-friendly practices carried out in the industry and all departments are involved. There is a periodic training conducted for the staff on following eco-friendly practices. The hotel has a fixed budget for implementing environmental practices. The hotel uses solar energy panel and energy efficient lighting system. Guests are involved in practicing eco-friendly practices by placing tent cards informing them of linen reuse programme.

Hotel No 5-- 5 Star

This hotel has Green team that consists of representatives from all the departments regulated by the Human Resource Manager to look after the environmental issues.

The hotel is certified under LEEDS certification. Staff is trained periodically for following green practices. The hotel has invested in sewage treatment plant, uses energy efficient bulbs, and segregates waste before disposing it.

Hotel No 6 -5 Star

This hotel belongs to one of the oldest chain of hotels in India, and one of the most well-known. This group has its own programme for implementation of green practices. All the employees have to undergo environmental training. The hotel group conducts energy audits every three years. There are a lot of green practices that are in use such as recycling one-sided printed paper for use as writing pads; conversion of old bed sheets that have outlived their wash factor into dusters and dust sheets; sewage treatment plant (STP) etc. CFL lights, which consume less energy, are used throughout the property. This hotel is certified under the Green Globe, a well-known international certification for the travel and tourism industry which is based on the standards of sustainable development.

Hotel No 7- 5 Star

Routine training is conducted for staff regarding environmental practices. Solar panels are used for conservation of energy and the hotel is authorized by LEEDS.

Hotel No 8 -5 Star

The hotel is actively involved in reducing energy consumption by using energy efficient lights. Guests are not involved in following green practices.

Hotel No 9 -5 Star

There is awareness about green practices followed. Energy efficient lights are used in the hotel and there are large open spaces with garden suites and water bodies, but this is mostly from an aesthetic point.

Hotel No 10 - 5 Star

The hotel is aware of green practices followed in the industry. Papers are recycled and reused. Old linen is reused by converting into dusters. Guests are involved in following green practices by organizing bicycle tours for them.

Hotel No 11 -5 Star

There is a lot of importance given to the incorporation of green practices in daily operations. Waste management, responsible purchasing, water conservation, energy saving measures, are strictly followed. Garbage is segregated and disposed correctly, organic composting is done. There is a Sewage treatment plant which recycles the water, which is then used for flushing and watering of plants. There is a hotel level Green Council established, which monitors the implementation of these practices. Recycling of one-side used paper is followed in all offices. Only Ecolab cleaning agents (that are environment-friendly) are used in the Housekeeping department and the On Premise laundry. There are no cut flowers in the guest rooms, only bamboo plants in transparent vases. Moreover, long-lasting flowers like anthuriums, calum lilies, bird of paradise etc. are in public areas. No huge elaborate flower arrangements are made with unnecessary foliage, instead these long lasting flowers are placed in transparent vases and stay for 8-10 days. The hotel promotes Sustainable meetings. It has a specific programme for involving guests in green practices. If the guests agree for reuse of linen in their rooms, they get certain points that give them discounts during their next stay at any hotel belonging to the group. This programme has encouraged many guests to be a part of it, more than half the guests who stay are seen to participate, if for the personal benefits they get.

Hotel No 12 -5 Star

The hotel has a special committee which looks after the responsibility of managing environmental issues, with enthusiastic participation of all employees. Training is conducted for eco-friendly practices for the employees. Moreover, there is maximum use of natural light in guest bathrooms. The hotel uses motion sensors for the lighting

system. Guests are involved in eco-friendly practices by keeping tent cards in their rooms, encouraging them to save water and electricity during their stay at the hotel. The hotel is involved in tree plantation drives, cleaning surrounding areas and also distributes homemade paper carry bags to medical shops.

Hotel No 13 – 4 Star

The hotel has a fixed budget for following green practices and conducts training programs regarding reusing resources and maintaining profitability. The hotel involves guests in green practices by encouraging them to reuse the linen in their rooms.

Hotel No 14- 4 Star

This hotel has fixed budget for executing green practices. The hotel uses eco-friendly cleaning agents. Solar water panels are used for hot water supply to the guest rooms and departments. Front office recycles one sided printed paper. Vermi culture pits are used for kitchen waste disposal.

Hotel No 15 - 4 Star

This hotel follows many eco-friendly practices. The staff is trained in segregating waste, recycling paper etc. The hotel processes its wet garbage by mincing machining and converts it into fertilizers. Solar water system and energy efficient lights are used. Air conditioning of the hotel is controlled by a computerized system. During low occupancy period vacant guest floors are completely shut down to conserve energy and cost. The hotel follows Earth hour.

Hotel No 16 - 4 Star

There are not too many green practices followed apart from solar panels to reduce costs and garbage segregation.

Hotel No 17 - 4 Star

The hotel is well aware of eco- friendly practices followed in the industry and implements the same. Garbage is segregated at the initial stage before disposing it also water is treated before letting it into the sewage system. The staff is trained for following water conservation and electricity conservation practices. The hotel holds a valid pollution control license. The guests in the hotel are not involved in following green practices.

Hotel No 18 - 4 Star

This is one of the oldest hotels in Pune. There is no specific programme for implementation of green practices. They do have solar panels for heating water and segregation of garbage, as per PMC norms. Guests are not involved in these practices.

Hotel No 19 - 4 Star

This hotel is located in the heart of the city. The hotel is aware about the eco- friendly practices followed in the industry and has its share in following the same. The hotel uses solar energy and energy efficient bulbs in the hotel. Guests are not involved in following green practices.

Hotel No 20 - 4 Star

There are no green practices followed, apart from solar panels to save energy costs.

Hotel No 21 - 3 Star

All departments are involved in following green practices. The hotel reuses the stationery and bed linens. Employees are given training for following green practices.

Hotel No 22 - 3 Star

The hotel is aware of the environmental practices which are followed in the industry. The garbage is identified and segregated before disposing it. There is no specific training given to the employees. Hotel tries to conserve water and electricity by following the government norms and conditions. Guests are not involved in following the green practices.

Hotel No 23 - 3 Star

This hotel is aware of the green practices followed in the industry. There is no specific training conducted for the hotel staff. Hotel reduces its cost and energy consumption by using energy efficient bulbs. Periodic energy audits are conducted. Guests are involved in implementing eco-friendly practices by encouraging them to recycle their linen.

Hotel No 24 - 3 Star

The hotel is aware of and follows eco- friendly practices. The hotel segregates its garbage at the initial stage and has vermi compost pits for garbage disposal. The hotel monitors its electricity and water consumption daily. Guests are involved in following eco- friendly practices by recycling linen. The hotel takes initiative in organizing rallies and awareness drives regarding green practices.

Hotel No 25 - 3 Star

There are no specific green practices followed in this hotel.

Hotel No 26 - 3 Star

This property belongs to Suson hotels Pvt. Ltd. Group. There is absolutely no awareness about green practices followed neither training is done nor guests are involved in following eco-friendly practices.

Hotel No 27- 2 Star

There was practically no awareness about green practices, or the need for such practices. Hence, there were no such practices implemented.

Hotel No 28 - 2 Star

Hotel uses energy saving lights but otherwise there is absolutely no awareness about following ecofriendly practices in the hotel.

Hotel No 29 - 2 Star

The hotel follows eco- friendly practices such as use of LED lights and, solar panels. The Human resource manager is responsible for managing all issues related to the environment.

Hotel No 30 - 2 Star

The management of this hotel only said that they were aware of the concept of green practices to be followed. However, there was no specific programme of the hotel meant for implementation of these practices. Although they do have solar panels for heating of water, this system was not put in place specifically for environmental reasons, but because it is more economical and convenient. Also, guests were not specifically asked to participate in any environment-friendly practices as yet. They were however open to implementing green practices in their daily operations, provided it did not involve major investments.

Hotel No 31 - 2 Star

There are no green practices followed as there is lack of infrastructure and awareness about the same.

Hotel No 32 - 5 Star

There are strict norms to ensure compliance with environment-friendly practices, with there being regular internal audits for the same. Energy conservation, water conservation, waste management, use of eco-friendly guest room supplies like paper coasters, hangers made of sawdust, paper bags, coverings for pens etc. are just a few of the things done. There are no flowers kept in the public areas, they are replaced by the environment-friendly potted plants. The group encourages green meetings and also offers free pick-up for a group of six or more guests who would like to come for a meal. There are large open lawns surrounding the hotel and substantial greenery all around. Also, there is a small water body with aquatic plants, to further incorporate the green touch. The emphasis on these practices is for all the departments of the hotel.

Hotel No 33 - 5 Star

This hotel is aware of all the eco- friendly practices followed in the industry. This property reduces the cost of stationary by using E-folios, recycling one sided printed papers and reducing food wastage by displaying daily food wastage chart in the cafeteria. The Training Manager and Human Resource Manager are delegated with the responsibility of managing environmental related issues. The hotel has a specific program for implementing green practices in the hotel. Regular training sessions are held for the employees. There is a regular food committee check implemented for reducing food wastage. The hotel has fixed annual budget for implementation of green practices. The hotel has scheduled lighting facility, regular energy audits and closing of floors during low occupancy. Guests are involved in following green practices by placing 'save water' tent cards or supplying fruits on request etc.

Hotel No 34 - 4 Star

The hotel follows some eco-friendly practices like garbage segregation and use of natural lighting. No specific training is conducted for the staff regarding creating awareness about following green practices.

Hotel No 35 -3 Star

This hotel is part of a chain that promotes a lot of eco-friendly processes for preservation of energy and water. They have specific guidelines for waste management and try to minimize water, noise and environmental pollution. With CFL lighting and Variable Refrigerant Volume (VRV) technology for air-conditioning along with key tag energy saver system and use of natural lighting in the design of their properties, a lot of energy is saved. Rain water harvesting, auto-flush system for public urinals and flow restrictors help to save water. Generators used are noiseless. Paper bags are used for delivery of guest laundry. This hotel chain has a structured system for implementation of green practices.

Hotel No 36 -3 Star

This hotel has written policy for implementing green practices. The hotel has specific program for implementing green practices by using soft copies for reports, reuse of one-sided paper etc. the hotel conducts specific training program to prevent environment degradation. The hotel has invested in installing Sewage Treatment Plant; it is maintained and used all the time. Maximum use of LED bulb and control on usage of energy is taken care of.

Hotel No 37 -3 Star

This hotel follows eco-friendly practices. A separate committee looks after the management of environmental issues. A program is run to promote awareness of eco-friendly practices and their impact. Hotel employees undergo training programs about green practices. The hotel contributes in preventing environment degradation by proper waste management, water treatment, and proper energy consumption etc. There is energy efficient lighting installed in the hotel. Hotel carries out initiatives like tree plantation, plastic reduction etc. in which the guests are involved as well.

Hotel No 38 -3 Star

Employees of this hotel are aware of the eco- friendly practices followed in the industry. This hotel does not have any written policy regarding implementation of green practices. No specific training for the same is conducted for the employees. The hotel has invested in planting green trees during the construction period. There are no specific measures taken for following other eco-friendly practices.

Hotel No 39- 3 Star

This hotel is aware of and follows green practices. Solar panels, water conservation system, reuse of stationery and reduction of use of paper are implemented. However, the hotel does not have any specific program for implementing green practices. Employees are not specifically trained to follow eco- friendly practices. Guests are not involved in following ecofriendly practices.

Hotel No 40 -3 Star

In this hotel the General Manager is responsible for dealing with environment related issues. Hotel does not have any specific training program for the employees in following green practices. The hotel uses energy efficient lights and solar system for conserving environment. Guests are involved by linen reuse program.

Hotel No 41-3 Star

Hotel does not have any specific training program for the employees in following green practices. The hotel uses energy efficient lights, electronic key cards and solar system for conserving environment. Guests are not involved.

Hotel No 42 -5 Star

The rooms have been constructed to have a lot of natural light, to reduce energy. There is a lot of greenery around the hotel. There are solar water heating panels and

segregation of garbage. Electronic key cards are used. However, there is no active programme for the implementation of green practices.

Hotel No 43- 5 Star

This hotel is beautifully located at a height and has a lot of greenery with lush gardens. Use of electronic key cards and solar panels for heating water helps in conservation of energy. Segregation of garbage is done on a daily basis. However there is no specific programme for green practices.

Hotel No 44 – 3 Star

This resort calls itself an eco-friendly resort. There is maximum use of natural light so that it is not necessary to switch on most lights during the day. Although there is an artificially created lagoon, it does not adversely affect the environment by avoiding diesel boats. Segregation of garbage is done and energy is conserved with the help of solar heating panels. Due to the large scale presence of water bodies, there are a lot of birds which come for a sip of water and to the charm of the resort.

Hotel No 45 -3 Star

This hotel is located amidst a lot of greenery. The guest rooms have large floor to ceiling windows, which gives plenty of natural light and saves energy. Garbage segregation is done. However they have no specific programme for green practices.

Hotel No 46 - 3 Star

This resort is unique as it has a Fresh air system which takes fresh air from outside, filters it and then distributes it through ducts to every guest room, so that the guests get to breathe fresh air. There is a solar powered hot water system which saves on the electricity. There is no guest involvement in green practices.

Hotel No 47- 3 Star

This resort is surrounded by large open spaces and there is a lot of greenery around. However, there are no specific green practices followed.

Hotel No 48-4 Star

All departments of this hotel are involved in following eco-friendly practices. The Chief Engineer and Executive Housekeeper are responsible for handling environment related issues. This hotel has a fixed annual budget for implementation of eco-friendly practices. The hotel has invested in landscaping; installing big windows for enhancing the natural light and a Sewage Treatment Plant. The hotel has light sensors in corridors and prevents usage of lights in the day time. This hotel is certified under the 'Green Building Council'. Guests are involved in this practice by linen reuse program and using remote controlled lights.

Hotel No 49- 3 Star

This hotel works to save the environment by using one sided papers, not using cut flowers in the guest rooms, etc. Guests are not directly involved in following environmental practices.

Hotel No 50- 3 Star

This resort is situated has great natural surroundings. They have a solar water heating system for the conservation of energy. There are large open spaces and lawns, and water bodies add to the visual appeal. However there is no specific practice to involve guests in eco-friendly practices.

Hotel No 51- 5 Star

This property is well aware of eco-friendly practices carried out in the industry. There are tent cards kept in the room for recycling the linen to reduce water consumption. It has waste segregation unit and a vermi culture pit. Rainwater harvesting is carried out.

Special training sessions are conducted for the employees of this hotel. The hotel has installed the solar energy system, sewage treatment plant, energy efficient lights to promote eco-friendly environment. The fort has large fields in its vicinity, where vegetables are grown that are used to make staff meals. Guests are involved in following green practices like linen reuse.

5.3. FINDINGS FROM GUESTS

It was found that most of the guests were aware of the concept of green practices in the hotel industry. The degree of awareness changed with respect to their profession and educational qualifications. Also, a majority of the guests in an older age group were not very willing to participate in these endeavors as compared to the younger professionals as they felt that they would have to compromise on their comfort levels.

5.3.1. FINDINGS OF THE GUEST DATA INTERPRETATION

After data analysis of the Guest questionnaires and carrying out association tests, the data was interpreted. The findings of the Guest data interpretation are listed out below-

1. Awareness about eco-friendly practices carried out in the hospitality industry is related to the age of the respondents.

As per the analysis and interpretation of data, it is found that 78.57% respondents in the age group below 30 years were found to be aware of these practices, while 21.43% were not aware. 85.35% respondents in the age group of 30 to 40 years, while 14.65% were not aware. 92% respondents in the age group of 40 to 50 years were aware, while 8% were not aware; and 75% of guests above 50 years were found to be aware of such practices, while 25% were not aware.

So, it can be said that Awareness about eco-friendly practices carried out in the hospitality industry is related to the age of the respondents.

Most guests across all age-groups are aware of these practices; however, only 75% of guests in the age group above 50 are found to be aware which is slightly lesser than in the other age-groups.

2. Awareness about Ecotels is related on the age of the respondents

As per the analysis and interpretation of data, it is found that 53.57 % respondents in the age group below 30 years were found to be aware of Ecotels, while 46.43% were not aware. 59.6 % respondents in the age group of 30 to 40 years while 40.4% were not aware. 74 % respondents in the age group of 40 to 50 years were found to be

aware of such practices and 56.25 % of guests above 50 years were found to be aware of such practices.

So, it can be said that Awareness about Ecotels is related to the age of the respondents, more respondents in the 30 to 50 years of age were found to be aware of Ecotels as compared to the respondents in the other age groups.

3. Participation in green initiatives is related to the frequency of travel of the respondent.

As per the analysis and interpretation of data, it is found that of the total respondents who participated in green initiatives, 84.81% respondents travelled once a year, 75.89% respondents travelled once in six months, 89.34% respondents travelled once in three months. 89.89% of the respondents travelled once a month or week

So, it can be said that Participation in green initiatives is related to the frequency of travel of the respondent, frequent travellers i.e. those that travelled once a week/once a month and once in three months participate more in green initiatives as compared to those that travelled once in six months or a year.

4. Willingness of respondents to pay extra charges in order to be able to experience green hotels is related to the frequency of travel of the respondent.

As per the analysis and interpretation of data, it is found that of the total respondents who were willing to pay extra charges in order to be able to stay in green hotels, 8.86 % respondents travelled once a year, 23.85 % respondents travelled once in six months, 25.96 % respondents travelled once in three months, 25.84% travelled once a month or week.

So, it can be said that respondents who travel less frequently are not as willing to pay extra charges in order to be able to stay in green hotels as compared to those respondents that travelled once in a week or month, three months, or six months.

5. Whether the respondent has stayed in a hotel which follows green practices is related to the purpose of travel of the respondent.

As per the analysis and interpretation of data, it is found that of the total respondents, 84.25% of business travellers have stayed in a hotel which follows green practices,

while only 68.99% of leisure travellers have stayed in a hotel which follows green practices.

So, it can be said that respondents who travel for the purpose of business are more likely to have stayed in a hotel which follows green practices as compared to those respondents who have travelled for leisure.

6. Whether the respondent is participating in green initiatives carried out in hotels is related to the purpose of travel of the respondent

As per the analysis and interpretation of data, it is seen that out of the total respondents, 52.01% of the business travellers (more than half the respondents) have participated in green initiatives carried out in hotels, as compared to only 32.56% to the leisure travellers.

So, it can be said that business travellers participate more in green initiatives carried out in hotels, as compared to leisure travellers.

7. Whether the respondents feel that green hotels are expensive is related to the purpose of travel of the respondent

As per the analysis and interpretation of data, it is seen that out of the total respondents, 67.77% of business travellers feel that green hotels are expensive, as compared to 54.26% of leisure travellers.

So it can be said that more business travellers feel that green hotels are expensive, as compared to leisure travellers.

8. Awareness of Ecotels is dependent on highest educational qualifications of the respondent

As per the analysis and interpretation of data, it is found that less than half the undergraduates (41.18 %) were found to be aware of Ecotels. More than half (58.68 %) of the graduates were aware of Ecotels, more than half (58.59%) of the post-graduates were aware of Ecotels. Maximum (70.59%) of the professionally qualified/doctorate respondents were aware of Ecotels.

So, it can be said that awareness about Ecotels is related to the educational qualification of the respondents, highly qualified respondents are found to be more aware of Ecotels as compared to the others.

9. Whether guests have stayed in hotels which follow green practices depends on the highest educational qualification of the respondent

As per the analysis and interpretation of data, it is found that majority of the professionally qualified/doctorate respondents (88.24%) have stayed in hotels which follow green practices. 77.34% post graduate respondents, 73.55% graduates and 64.71% of the undergraduate respondents have stayed at hotels which follow green practices.

So, it can be said that whether guests have stayed at green hotels is related to the educational qualification of the respondents, more highly qualified respondents are found to have stayed at green hotels as compared to the others.

10. Whether respondents have participated in green initiatives undertaken by the hotel depends on the highest educational qualification of the respondent

As per the analysis and interpretation of data, it is found that hardly one third of the (33.06%) of the graduate respondents have participated in green initiatives undertaken by the hotel they were staying in. 58.82% under graduates and 52.94% professionally qualified/doctorate respondents. Slightly less than half the post graduate respondents (48.44%) have participated in green initiatives undertaken by the hotel that they were staying in.

So, it can be said that overall half the guests across all categories have participated in green initiatives undertaken by the hotel that they were staying in.

In fact, it is seen that more undergraduates (58.82%) have participated in green initiatives undertaken by the hotel that they were staying in, some of which were students.

11. Whether respondents feel the necessity of having environment-friendly practices in the hotel depends on the highest educational qualification of the respondent

As per the analysis and interpretation of data, it is found that 97.06% of the Professionally qualified or Doctorate respondents felt the necessity of having environment-friendly practices in the hotel. 88.28% of the Post graduates felt the necessity of having environment-friendly practices in the hotel. This is followed by 88.24% of the undergraduates, some of which are students. 82.64% of the Graduates felt the necessity of having environment-friendly practices in the hotel.

So it can be said that whether respondents feel the necessity of having environment-friendly practices in the hotel depends on their Highest educational qualification. Undergraduates show a slightly higher percentage as compared to graduates, some of the respondents of this category are still students.

12. Whether respondents are willing to pay extra charges in order to be able to stay in such hotels depends on the highest educational qualification of the respondent.

As per the analysis and interpretation of data, it is found that less than one third of the respondents from all the categories were ready to pay extra charges in order to be able to stay in green hotels- 27.21% professionally qualified or doctorate, 25% of post-graduates, 14.88% graduates and 5.88% of under graduates. So overall it can be said that very few respondents from all categories are willing to pay extra charges in order to be able to stay in such hotels, least amongst them the undergraduate respondents.

13. Awareness of eco-friendly practices and awareness of Ecotels

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels are aware of Ecotels.

14. Awareness of eco-friendly practices and whether the respondents had stayed at a hotel which follows green practices

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels can say that they have stayed at a hotel which follows green practices.

15. Awareness of eco-friendly practices and whether the respondents feel the necessity of having environment-friendly practices in hotels

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels feel the necessity of having environment-friendly practices in hotels.

16. Awareness of eco-friendly practices and whether respondents prefer to stay in a hotel which follows such practices

After analysis and interpretation of the data, it is found that only those respondents aware of eco-friendly practices followed in hotels prefer to stay in a hotel which follows such practices.

17. Respondents think that such hotels might be more expensive as compared to those which do not follow or implement such practices and if they are willing to pay extra charges in order to be able to experience such hotels

After analysis and interpretation of the data, it is found that those respondents who think that such hotels might be more expensive as compared to those which do not follow or implement such practices are not willing to pay extra charges in order to be able to experience such hotels.

18. Whether respondents have stayed in a hotel which follows green practices in its day to day operations and if they feel that the hotel they are staying in at the moment is following green practices in its operations

After analysis and interpretation of the data, it is found that only those respondents who have earlier stayed in a hotel which follows green practices in its day to day operations can judge whether the hotel they are staying in at the moment is following green practices.

19. Whether respondents are more aware of eco-friendly practices depends on place of residence of the respondents

More respondents from outside India (93.54%) are aware of eco-friendly practices followed in the hospitality industry as compared to those respondents from India (84.09%). However, there is not much significant difference in the awareness levels of respondents from within Maharashtra & those from outside Maharashtra.

5.4. FINDINGS FROM TRAVEL AGENCIES

1. Majority of the travel agencies surveyed during this research were aware of eco-friendly practices carried out in hotels.
2. However, less than half of the respondents were aware of the various green certifications that are available. Amongst those that were aware, there were only 3 main certifications that they knew of.
3. When asked to rate client preferences while making hotel bookings, it was found that clients gave maximum importance to their budget i.e. the hotel's rates, then location of the hotel, then facilities offered by the hotel, with eco-friendly practices followed in the hotel getting the least preference. During personal interviews, a few travel agencies did say that some clients do ask about sustainable hotels, that they find advertised on travel portals like expedia.co.in or tripadvisor.com.
4. During personal interviews for data collection, some respondents revealed that a few clients specifically request for homestay accommodation, in the middle of plantations or forests to be close to nature and experience green surroundings and authentic local food. This particular observation had no bearing on the research conducted, as the sample selected here is two to five star hotels and resorts.
5. However, not all clients for whom travel agencies booked hotels were specifically looking out for green hotels, or eco-friendly hotels. In fact, significantly, none of the respondents reported more than 10 bookings for eco-friendly hotels in a month.
6. Majority of the travel agencies did not feel the need to promote eco-friendly hotels.
7. All the respondents unanimously declared that there is no support from the State Government for eco-friendly hotels.

5.5. SUGGESTIONS AND RECOMMENDATIONS

After carrying out this research, the researcher would like to make the following suggestions. These are applicable at the pan-India level.

1. It is suggested that the State government takes up the challenge of promoting green hotels aggressively and offer incentives to hotel properties that incorporate such practices in their day to day operations in the form of investment aid or subsidies.
2. Travel agencies too should be offered support to market these hotels by the government.
3. Hotel associations should get involved in increasing awareness about green practices as well as advise existing and upcoming hotels on how to incorporate these practices.
4. Hotels should take up green procurement on a ground level and create awareness about it. This is the basic need of green hotels. It will have two advantages- it will not only help the hotels in their endeavor of further implementing green practices, but also be useful in increasing the market for green products. There will be an increase in the employment of green ventures, thus creating new job opportunities, which will help the economy.
5. Green marketing and green branding should be aggressively followed by hotels that are really keen to implement environment-friendly practices in their daily operations.
6. More hotels should offer incentives to guests who participate in green practices, like the certain hotel groups do. The guests will feel encouraged to take part, as they will get personal benefits like discounts on their next bill or a complimentary facility during the current stay. Thus more and more guests will participate in the implementation of eco-friendly practices in the hotel where they stay.
7. Also Mahratta Chamber of Commerce and Industries, with its large number of members across various industries can help promote green hotels amongst its members, thereby increase their awareness for the environment and increase the market for such hotels. So, this body should be involved in promoting of green hotels.

CHAPTER 6

CONCLUSIONS

6.1. To summarize

6.2. Hotel and Travel agencies view on management of green practices

6.3. Guest view on green practices followed in hotels

6.1. TO SUMMARIZE

After carrying out this research, the researcher has summarized the following findings based on hotel and travel agency views as well as guest views as mentioned below. These conclusions are in the context of the research based in Pune region, though these may be applicable in Maharashtra, and then India as well on a broader scale as the hotel industry is doing well and is one of the important contributors to the GDP.

6.2. HOTEL AND TRAVEL AGENCIES VIEW ON MANAGEMENT OF GREEN PRACTICES

1. Most of the hotels surveyed in this research said that they were aware of green practices that are carried out in the hotel industry. 94% of the 51 hotels surveyed knew of these practices. All hotels that commenced operations after the year 2000 were found to be aware of green practices and their implementation.

An overwhelming number of hotels out of these i.e. 86% said that they were implementing green practices in their daily operations, while 14% said that they did not follow any green practices.

However, it was seen that majority of the hotels i.e. 41% said that they were following very few or bare essential green practices. 39% of the hotels said that green practices that are easy to implement without too many adjustments and investments are followed.

Only 6% of the hotels said that they make noticeable efforts to completely follow green practices in their daily operations.

2. Less than half the hotels surveyed (43%) said that they had a specific programme for the implementation of these practices.

3. Most of the hotels i.e. 51% said that there was not much management involvement in the implementation of green practices in their property. We can see complete involvement of the Management in the implementation of these practices in only 33% of the hotels. However, 16% of the hotels surveyed said that there was no Management involvement at all in the implementation of these practices, while the remaining hotels said that the management was superficially involved.

4. Less than half the hotels surveyed (37%) had a written policy document by the Management, for the implementation of these practices. Also, it was found that more of the chain hotels had a written policy document regarding implementation of green practices as compared to independent hotels. This could be because hotel chains have to have uniform policies across all their properties, and these are best defined by putting them on record, to avoid any ambiguity.

5. More than half the hotels surveyed (63%) said that they had a specially designated staff member who is in-charge of implementing these practices in the hotel.

6. The various green practices that are implemented in Pune hotels include the following measures, segregated as per the department-

- i. Front Office
 - ✓ Recycling of paper
 - ✓ Taking minimum print outs of records
- ii. Housekeeping department
 - ✓ Linen reuse programme
 - ✓ Water Sprinklers
 - ✓ No water wastage
 - ✓ Low pressure flush in bathrooms

- ✓ No cut flowers
- ✓ Eco friendly cleaning agents
- ✓ Supplies like jute bags, paper coasters & laundry bags etc.
- iii. Kitchen
 - ✓ Segregation of Garbage
 - ✓ Growing herbs & vegetables in own garden
- iv. Food and Beverage Service
 - ✓ No fruit basket in rooms
 - ✓ Shuttle service for banquet functions
 - ✓ No disposable crockery
 - ✓ Use of recyclable products
- v. Engineering and Maintenance
 - ✓ Vermi composting
 - ✓ Recycling treated water for irrigation
 - ✓ Sewage treatment plant
 - ✓ Bio gas plant
 - ✓ Solar panels
 - ✓ Electronic key card
 - ✓ Energy efficient lights
 - ✓ Motion sensor lighting system
 - ✓ Maximum use of natural lighting
 - ✓ Treatment of kitchen, laundry, toilet exhausts

7. Although majority of the hotels surveyed i.e. 84% thought that it was necessary to have training on green practice implementation for the staff members, only 47% said that they actually give specific training inputs to their staff members for the implementation of green practices.

8. Implementing these practices does not involve too many costs, as most of the things can be done with less investment. Most of the hotels do not incur expenses, as they only implement those green practices that are feasible without investments or major adjustments.

9. Less than half the hotels surveyed have made initial investments in their property at the time of construction to ensure implementation of green practices. Solar panels, Sewage Treatment Plant and Rainwater harvesting are among the major facilities that were planned from the time of commencing operations of these properties, with investment made.

10. More than half the total respondents surveyed said that there is improvement in the overall hotel performance in terms of reduction of operating costs. Electricity and water costs are the main heads under which savings are seen. This improvement was found in more chain hotels as compared to independent ones. Most of the respondent hotels also said that they had installed energy efficient lighting in more than half the areas.

10. All the respondent hotels and travel agencies unanimously agreed that there is no government support for the implementation of green practices.

11. Most of the hotels surveyed were aware of the various certifications that are available for hotels to go green. However very few hotels surveyed, less than one-fourth the total number were certified under any of these. This could be due to the costs involved in certification.

However, less than half the travel agencies surveyed were found to be aware of these practices.

12. Hotels said that only one-third of the total number of guests who visit these hotels for rooms, food or banquet functions actually give importance to green practices followed. Travel agencies who make bookings for guests said that there were negligible enquiries for eco-friendly hotels from their clients.

13. Majority of the hotels surveyed said that in their experience very few guests were ready to pay extra in order to be able to stay in hotels following green practices. Also, only those guests who were very particular about specifically using green hotels were found to be ready to pay extra.

6.3 GUEST VIEW ON GREEN PRACTICES FOLLOWED IN HOTELS

1. Maximum number of guests in the 30 to 50 years age group were found to be aware of green practices followed in hotels and Ecotels, as compared to the others.

2. Frequent travellers i.e. those that travelled once a week/once a month and once in three months participate more in green initiatives as compared to those that travelled once in six months or a year. Frequent travellers are used to staying in hotels, and have experienced the facilities regularly, whereas those who travel rarely want to get maximum out of the hotel stay and experience everything the hotel offers. Hence they will not be so keen to make adjustments like increasing the air-conditioning temperature.

3. Frequent travellers are more willing to pay extra charges in order to be able to stay in green hotels as compared to those who travel very less, consequently get an opportunity to stay in hotels may be once a year or so

4. Business travellers are more likely to have stayed in a hotel which follows green practices as compared to leisure travellers. That could be the reason why they find green hotels more expensive as compared to the other hotels.

Also, business travellers participate more in green practices carried out in hotels, as compared to leisure travellers. This is because when guests travel for leisure, they usually prefer not to make any adjustments like reusing linen or not using the bath tub, they want to completely utilize all the facilities offered by the hotel. For leisure travellers, the hotel stay is a very important part of the travel experience, one that they may not be willing to compromise on.

5. Most of the guests were found to have participated in energy-saving green practices carried out in the hotels that they were staying in. This was the practice that showed frequent participation from guests amongst all the other practices like water conservation, participation in tree plantation etc.

6. Most of the guests who are aware of hotels following green practices and Ecotels are the highly educated ones. This may be because they have access to more sources of information. It was found that more of the highly qualified guests were likely to have participated in implementing green practices at the hotel they had stayed in. An

exception here was in case of the undergraduate guests, some of whom were students, with the desire to do something for the environment.

Finally, we can say that green hotels today are a tangible component of the hotel industry. These practices help in the conservation of natural resources thus are beneficial for the ecology and the environment in the long run. Eventually, it also results in saving of money thus adding to the hotel's profit. However, during the course of the survey it was seen that though most hotels in the region surveyed i.e. Pune are aware of these practices, they are not completely implementing these practices. Most of the times, it is just superficial implementation. Guests too are not very keen to participate in these practices. This needs to change.

Hotels must come forward and try and implement as many green practices as they can. It does not have to be a mega project in the beginning; initially they can start with little things to show their support for the environment and then go on to bigger arrangements. Then we can truly say that the hotel industry in Pune region, and on a larger scale in India is going the green way!

ANNEXURE I-QUESTIONNAIRE

(FOR HOTEL STAFF)

PART I

1. Name of the hotel & category- _____
2. Address- _____
3. Year of commencement of operations- _____
4. Is the hotel a part of any chain?

Yes	
No	
5. If yes, mention details- _____

6. Name of the Staff member- _____
7. Department- _____
8. Designation- _____
9. Age- _____
10. Gender

Male	
Female	
11. Employed in the hotel industry since- _____

PART II

12. Are you aware of eco-friendly practices carried out in the hospitality industry?

Yes	
No	

13. Does the hotel follow eco-friendly practices in daily operations?

Sr No	Green Practices followed	
i.	Not followed	
ii.	Very Few or bare essential green practices followed	
iii.	Practices that are easy to implement without too many adjustments and investments are followed	
iv.	Hotel makes noticeable efforts to completely follow green practices	

14. If yes, select the various green practices followed in your hotel from amongst those mentioned below-

Sr No	Category A--Waste Management	
v.	Vermi composting	
vi.	Segregation of Garbage	
vii.	Wall mounted shampoo dispensers	
viii.	Recycling of paper	
ix.	No fruit basket in rooms	
x.	Sewage treatment plant	
xi.	Bio gas plant	
xii.	Taking minimum print outs of records	

Sr No	Category B-Water Conservation	
i.	Recycling treated water for irrigation	
ii.	Linen reuse programme	
iii.	No bathtubs (for three star category & above)	
iv.	Water Sprinklers	
v.	No water wastage	
vi.	Low pressure flush in bathrooms	

Sr No	Category C-Green cover & Tree Plantation programme	
i.	Large Garden/Green spaces	
ii.	Rooftop garden	
iii.	Growing herbs & vegetables in own garden	
iv.	No cut flowers	
v.	No mobile tower near the hotel	
vi.	Tree plantation drives	

Sr No	Category D-Energy saving	
i.	Solar panels	
ii.	Electronic key card	
iii.	Eco button	
iv.	Energy efficient lights	
v.	Motion sensor lighting system	
vi.	Maximum use of natural lighting	

Sr No	Category E- Reducing fuel consumption	
i.	Shuttle service for banquet functions	
ii.	Provision of bicycles to guests on demand	
iii.	Use of locally sourced ingredients/Promotion of farm to table concept	

Sr No	Category F-Eco friendly room supplies & cleaning agents	
i.	Eco friendly cleaning agents	
ii.	Supplies like jute bags, paper coasters & laundry bags etc.	
iii.	Refillable thermos flasks instead of mineral water bottles	

Sr No	Category G-Green banqueting	
i.	No disposable crockery	
ii.	Use of recyclable products	

Sr No	Category H-Green Certification	
i.	Various certification programmes	

Sr No	Category I-Air pollution control	
i.	Treatment of kitchen, laundry, toilet exhausts	

15. With reference to the above question, rate your overall response on a scale of 1 to 5, with 1 being least and 5 being maximum value to show the level of implementation of various categories of green practices followed in the hotel. (Note-the above list is not comprehensive,

you may consider any other green practices followed, apart from those mentioned in Qs. No 14 for rating of your responses)

Sr No	Green practices	1	2	3	4	5
i.	Waste Management					
ii.	Water Conservation					
iii.	Green cover & tree plantation programme					
iv.	Energy Saving					
v.	Reducing Fuel Consumption					
vi.	Eco friendly room supplies & Cleaning agents					
vii.	Green banqueting					
viii.	Green Certification					
ix.	Air pollution control					

16. Departments involved (You may select multiple options)

Sr No	Department	
i.	Front Office	
ii.	Housekeeping	
iii.	F&B Service	
iv.	Food production	
v.	Engineering & maintenance	
vi.	All departments	

17. Is the management involved in implementation of these practices?

Sr No	Management Involvement	
i.	Completely	
ii.	Not much	
iii.	Not at all	

18. Does the hotel have a written policy document?

Yes	
No	

19. Are one or more individuals within the organization delegated with the responsibility of managing these environment-related issues?

Yes	
No	

20. If yes, select the response

Sr No	In charge	
i.	Chief Engineer	
ii.	Executive Housekeeper	
iii.	HR Manager	
iv.	General Manager	
v.	All Department Representatives	
vi.	Special Committee	

21. Is the hotel an Ecotel?

Yes	
No	

22. If no, then does the hotel group have any specific programme for implementation of green practices in the hotels?

Yes	
No	

23. Is the staff given some specific training inputs by the hotel regarding implementation of these practices?

Yes	
No	

24. If yes, select the response

Sr No	Type of Training	
i.	Orientation Training	
ii.	Online Training	
iii.	Certification Training	
iv.	Departmental Training	

25. In your opinion is there a necessity of having such training programs conducted?

Yes	
No	

26. Does the hotel incur expenditure annually for implementation of these practices?

Yes	
No	

27. If yes, what is the approximate cost incurred annually in INR?

Sr No	Cost	
i.	Between 1 to 5 lakhs	
ii.	Between 5 to 10 lakhs	
iii.	More than 10 lakhs	
iv.	Cannot be disclosed	

28. Has the hotel made any initial investment to ensure green practices in the hotel, at the time of construction of the property for following environment-friendly norms?

Yes	
No	

29. If yes, select from the options mentioned below (You may select multiple options)

Sr No	Area of investment	
i.	Solar Panels	
ii.	Rainwater harvesting	
iii.	Sewage Treatment Plant	
iv.	Vermipit	
v.	Environment friendly building material	
vi.	Thermally sealed double glazed windows	
vii.	Recycling of Water arrangement	
viii.	Large gardens and water bodies	

30. Is the hotel actively involved in achieving reduction in energy consumption and costs?

Yes	
No	

31. Has the overall performance of the hotel consistently improved due to the implementation of green practices in terms of reduction of operating costs over the past three years?

Sr No	Reduction of operating costs	
i.	Yes	
ii.	No	
iii.	Not really as not many green practices are implemented	

32. Is energy-efficient lighting installed in at least half the areas of the hotel?

Yes	
No	

33. Is there any financial support from the State government for the implementation of these initiatives?

Yes	
No	

34. If yes, mention details-

PART III

35. Are you aware of various certifications that are available globally as well as in India for hotels conforming to eco-friendly norms?

Yes	
No	

36. If yes, mention details-

37. Is the hotel certified under any of these?

Yes	
No	

38. If yes, mention details-

PART IV

39. If the hotel is implementing eco-friendly practices in its operations, then are the guests involved in this initiative?

Yes	
No	

40. If yes, select from the options mentioned below- (You may select multiple options)

Sr No	Guest Involvement	
i.	Linen Reuse	
ii.	Car Pooling/Shuttle service	
iii.	Using shower instead of bath tub	
iv.	Using Eco-button(Reducing Air conditioning temperature)	
v.	Providing bicycles for local use	
vi.	Conducting tree plantation drives	
vii.	Water conservation programmes	

viii.	Segregation of waste generated in the guestroom	
ix.	Switching off non-required lights in the guestrooms	

41. Do guests consider green hotels as an important factor in booking rooms or venues for banquet functions or meals?

Yes	
No	

42. Are guests ready to pay extra i.e. higher room or meal costs for these green initiatives?

Yes	
No	

43. Does the hotel carry out initiatives to popularize environment-friendly ways in the community as part of Corporate Social Responsibility activities?

Yes	
No	

Signature of the Respondent - _____

Thank you for your valuable time!

ANNEXURE II- QUESTIONNAIRE

(FOR HOTEL GUESTS)

PART I-

1. Name of the Respondent- _____
2. Address- _____
3. Age- _____
4. Gender-

Male	
Female	

5. Name of the Organization serving- _____
6. Designation- _____
7. Pay group- (Select any one option)

Sr No	Pay group	
i.	Salaried	
ii.	Retired	
iii.	Self employed	

8. Highest Educational qualification-(Select any one option)

Sr.No.	Education level	
i.	Under Graduate	
ii.	Graduate	
iii.	Post Graduate	
iv.	Professionally Qualified	
v.	Doctorate	

9. Frequency of travel- (Select any one option)

Sr.No.	Frequency	
i.	Once a year	
ii.	Once in 6 months	
iii.	Once in 3 months	
iv.	Once a month or Once a week	

10. Purpose of travel-(Select any one option)

Sr.No.	Purpose	
i.	Business	
ii.	Leisure	

11. Name of the Hotel where staying currently & its category-

PART II

12. Reason for selecting a particular Hotel to stay-(You may select multiple options)

Sr No	Reason	
i.	Location	
ii.	A new experience	
iii.	Service standards	
iv.	Recommendation by friend	
v.	Recommendation by travel agent	
vi.	Contract with company	
vii.	You have stayed there earlier	

13. Are you aware of eco-friendly practices carried out in the hospitality industry?

Yes	
No	

14. Are you aware of Ecotels?

Yes	
No	

15. Have you stayed in a hotel which follows green practices in its day to day operations?

Yes	
No	

16. If yes, then select the ones that you have observed during your stay in that hotel.(You may select multiple options)

Sr. No	A-Waste Management	
i.	Vermicomposting	
ii.	No fruit basket in the room, instead giving a fruit plate on request	
iii.	Sewage treatment plant	
iv.	Segregation of garbage	
v.	Wall mounted soap & shampoo dispensers	

Sr. No	B-Water Conservation	
i.	Recycling paper	
ii.	Recycling water	
iii.	Linen reuse	
iv.	No Bath tubs	
v.	No water wastage	
vi.	Low pressure flush in bathrooms	

Sr. No	C-Green Cover and Plantation	
i.	Large garden or green space	
ii.	Rooftop garden	
iii.	No cut flowers, instead potted plants or bamboo plants in guest rooms & public areas	
iv.	Growing own vegetables in the garden	
v.	No mobile tower near the hotel	
vi.	Tree plantation drives	

Sr. No	D-Energy Saving	
i.	Using Solar energy/solar panels	
ii.	Electronic key card	
iii.	CFL bulbs	
iv.	Eco button	

Sr. No	E-Reducing Fuel consumption	
i.	Carpooling /Shuttle services	
ii.	Use of locally sourced ingredients	
iii.	Provision of bicycles to guests to get around locally	

Sr. No	F-Eco friendly Room Supplies	
i.	No plastic bottles, instead refillable thermos flasks	
ii.	Paper laundry bags instead of plastic	
iii.	Paper coasters instead of plastic	
iv.	Eco friendly room supplies like jute bags & stationery items	
v.	Eco-friendly cleaning agents	

Sr. No	G-Green Banqueting	
i.	No disposable crockery, instead reusable crockery	
ii.	Use of recycled or recyclable products	

Sr. No	H-Green Certification	
i.	Ecotel Certification	

17. Do you feel that the hotel you are staying in at the moment is following green practices in its operations?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

18. Have you as a guest participated in green initiatives undertaken by the hotel you were staying in?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

19. If yes then rate your response on a scale of 1 to 5, with 1 being least and 5 being maximum value to show the level of participation in each of these practices in the hotel.

Sr No	Green practices	1	2	3	4	5
i.	Waste Management					
ii.	Water Conservation					
iii.	Tree Plantation programme					
iv.	Energy Saving					

v.	Reducing Fuel Consumption					
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20. Do you feel the necessity of having environment-friendly practices in hotels?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

21. Would you prefer to stay in a hotel which follows such practices?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

22. If no, then why?(Select any one option)

Sr No		
i.	Reduced comfort	<input type="checkbox"/>
ii.	No personal benefit	<input type="checkbox"/>
iii.	Not sure if such practices truly help the environment	<input type="checkbox"/>

23. Do you think that such hotels might be more expensive as compared to those which do not follow or implement such practices? s

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

24. Are you willing to pay extra charges in order to be able to experience such hotels?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

Signature of the Respondent _____

Thank you for your valuable time!

ANNEXURE III-QUESTIONNAIRE

(FOR TRAVEL AGENCIES)

PART I

1. Name of the Agency-

2. Address-

3. Year of commencement of operations-_____

4. Does the Agency have multiple branches?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

5. Name of the Respondent-

6. Department-

7. Designation-

8. Age-_____

9. Gender

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

10. Employed since-_____

PART II

11. Are you aware of eco-friendly practices carried out in the hospitality industry?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

12. If yes, are you aware of various certifications that are available globally as well as in India for hotels conforming to eco-friendly norms?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

13. If yes, mention details-

14. Clients consider the following factors while asking you to make hotel bookings for them-rate them from 1 to 5, with 1 being the least & 5 being the maximum value -

Sr No	Reason	1	2	3	4	5
i.	Location					
ii.	Budget					
iii.	Facilities offered					
iv.	Eco friendly practices followed					

15. If clients ask for eco-friendly hotels, then what is the number of such bookings per month?

Sr No	Client request for eco-friendly hotels	
i.	Less than 5 bookings	
ii.	5 to 10 bookings	
iii.	More than 10 bookings	

16. If no, then do you feel the necessity of promoting such hotels?

Yes	
No	

17. Is there any support from the State government for the promotion of such hotels?

Yes	
No	

18. If yes, mention details-_____

Signature of the Respondent - _____

Thank you for your valuable time!

RESEARCH PUBLICATIONS

RESEARCH PAPER 1 -AS SINGLE AUTHOR

Title-‘Awareness of Eco-friendly practices in hotels in South-East Asian countries of Singapore, Malaysia and Thailand’ presented at International Interdisciplinary Research Conference on Economics, Commerce, Management & Technology held on 1st June 2013 at Hotel Royal Heritage, Nasik.

Published in International Journal of Multidisciplinary Research (IJMR)

Month and Year- June 2013

Volume II, Issue 3(I) Pages-8-10

ISSN: 2277-9302

RESEARCH PAPER 2- AS SINGLE AUTHOR

Title- ‘High Source of Revenue-MICE Tourism in India’ presented at the 4th International Symposium on Management, Technology & Engineering Sciences held on 21st September 2013, at Hotel Aurora Towers, Pune.

Published in International Journal of Business Management and Social Sciences (IJBMS)

Month and Year- September 2013

Volume III, Issue 1(II) Pages-85-89

ISSN: 2249-7463

RESEARCH PAPER 3-AS FIRST AUTHOR

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Published in Abhinav International Monthly Refereed Journal of Research in Management & Technology (Online)

Month and Year- January 2015

Volume (IV) Issue (I) Pages-1-6

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Volume (IV) Issue (XI) Pages 1-5

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Website- www.abhinavjournal.com

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