



**TO INVESTIGATE THE INFLUENCE OF GREEN PRACTICES ON CONSUMERS IN
SELECTION OF STAR CATEGORY HOTELS OF DELHI-NCR**

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Abstract

Hospitality industry principally hotel industry consumes natural resources and generates waste products. There are only few sources of energy on earth due to that each and every sector focuses on Eco Friendly Practices and hospitality industry is not left behind. To protect the natural resources hotel industry started conserving energy, by implementing several green practices such as linen reuse program, adjustable temperature control, occupancy sensors, recycling programmes and many more. Due to the increased level of awareness in guests about environmental issues, the Acceptance of environmental concerns continues to increase in hotel industry. Acknowledging this very fact, the present study focuses on Investigating the influence of eco-friendly practices implemented in star category hotels of Delhi-NCR along with the major challenges faced by the hotels in the implementation of green practices in their operations. A well-structured questionnaire was developed to collect information from the hotel personnel. The results indicated that there are certain eco-friendly practices like garbage disposal, installation of sewage treatment plant, usage of dual flush in bathrooms, electronic key cards and energy efficient lighting are mostly exercised practices in all the star category hotels of Delhi-NCR. The findings also revealed that initial investment cost for green set-up is very high which is one of the prime challenge faced by the hotels in the implementation of green practices.

Keywords: Hospitality Industry, Eco- Hotels, Green practices, Sustainable, Natural Resources



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Introduction

India is land of culture, every year people from various countries visit India for various purpose whether it is related to trade or business, Medical, Leisure or Religious point. In year 2019 the total Foreign Tourists Arrival in India is approx. 10.93 million with an Annual Growth Rate of 3.5%, from that the approximate Foreign Exchange Earning is about Rupees 211661 Crores (US \$ 30.058 Billion) with an annual growth rate of 8.6%. Among all countries India occupies 23rd Rank in World Tourist Arrivals. (MOT,GOI,2020). According to World Travel & Tourism Council (WTTC) the direct and induced impacts of travel and tourism contributed USD\$7.6 trillion into global economy and 292 million employment opportunities globally in 2017 (WTTC, 2017).

With the rapid increase in the number of hotels, there is also increase in the environmental degradation because of their increased consumption and up to the certain extent wastage of various resources including electricity, water, food, fuel in terms of Petroleum, LPG etc. Due to the rising concern of Environmental degradation, tourists are more conscious about the negative impact of tourism and due to that the concept of Eco tourism emerged which further leads to the



boost in the concept of Eco Tourism. (Chand & Garg, 2017). Green hotels are defined as accommodation institutions that execute various eco-friendly practices such as saving water/energy, implementing eco-friendly procurement procedures, and reducing emissions/waste to protect the natural environment (Kalafatis, Pollard, East, & Tsogas, 1999; Laroche, Bergeron, & Barbaro-Forleo, 2001). Some scholars have suggested that green hotels are those that show a kind of environmental apprehension that can render into a pledge to Environment Friendly practices (e.g. Watkins, 1994).

Hotels are one of the Important part of the tourism Industry because it provides basic facilities i.e lodging & food along with certain luxuries including Dining Outlets Serving various cuisines, Gym, Spa, Banquets, Business Centre etc to a tourist and act as the major component for making the journey of tourist memorable (Chand & Garge, 2017). The reasons to go eco friendly also include monetary benefits, strengthening employee commitment, improved customer loyalty and goodwill of the organisation (Gan, 2006; Juholin, 2004). While existing literature articulates that there are a majority of motives for a hotel to become eco-certified. The hospitality industry is accountable for substantial amounts of waste as well as rigorous resource consumption (primarily water and energy) around the clock throughout the year. Numerous factors attract hotels to adopt eco-friendly practices which include like subsidy from various governmental policies, local environmental associations and legal concerns (Zhu & Sarkis, 2006; Setthasakko, 2007; Kasim & Ismail, 2012). Eco Friendly practices adopted in hotels have the positive image on guest as compared to their intrans (Iwanowski & Rushmore, 1994).

Review Of Literature

Tsoutsos et al (2005) concluded that Solar energy is one the best source of energy because it has the more benefits as compared to the traditional energy source, thus it is more reliable for the sustainable human development activities. Ali et al (2008) mentioned in the research that lighting of the main building including the entrance & exit of a hotel, Air Conditioner (HVAC) and illumination in the Public Area of A hotel consumes more energy as compared to other departments of a hotel so there is the requirement to conserve energy. They also mentioned that managers of 2 star – 5 star hotels are more interested implement energy saving and eco-friendly program in their hotel as compared to the managers of 1 star hotels.

Garg and Bansal (2000) explained in their research that 30 % of the total investment in the electrical energy can be saved if occupancy sensors are installed and maintained properly in the hotel premises. Tiwari et al (2020) concluded in a research that Lighting from the natural sources, Electronic key card in the guest rooms and energy efficient lighting are the frequently used practices adopted by star category of hotels to conserve energy. Subbiah and Kannan (2011) mentioned in their research that The major energy technologies suggested for the hoteliers are the sensor based lighting; heating, ventilation and air-conditioning systems (HVAC); multiple speed drivers; and energy management systems. For reducing water usage hotels must install low flow shower heads, electronic sensor based water taps, and drainage barriers around pools; modification of traditional toilets with ultra-flow toilets; use electric & water saving washing machines; and consider other sustainable sources of garden watering such as reusing rainwater, treated water in which detergent is dissolved and water that is collected from air conditioners.

Waris and Hameed (2020) stated in their research that the reduction of Energy is being reduced by using Energy efficient appliances and also they fulfil customer demands in a more better bay as they appliances are designed and intended to be practical and useful rather than attractive. Li et al (2019) concluded in their research that Consumers are only inclined towards energy efficient appliances if they have the knowledge about the environment, they are



concerned about the environment and apart from that their behaviour and attitude is positively correlated to the energy saving appliances. Thao (2017) mentioned in a research that The view point of hotel guests is related to their choice of Green Hotel, he further mentioned that the new energy conserving appliances have the most utilized and guest strongly influenced by them in the choice of the green hotel. Waris and Hameed (2020) mentioned in their research that the consumer knowledge and understanding about the various eco labels mentioned on various electrical appliances and consumer view point about environmental concern are few key factors for the choice of Energy efficient appliances. Millis and schleich (2012) Concluded in their research that persons having the age group of 18-35 years and with a good educational background are more focused towards energy conserving appliances and practices whereas the persons of age group 60 years and above are more focused towards the financial saving and low adoption of modern technology. Gossling et al (2019) Mentioned in their research that linen reuse will be increased if its advantages, benefits are communicated to guest in more innovative way.

Objectives Of The Study

1. To Identify various Green Practices followed in Star Category of Hotels.
2. To Investigate the Influence of Eco Friendly Practices on Consumers in the selection of star category hotels of NCR.
3. To suggest the measures for the improvement of Green practices followed by star category hotels of NCR.

Research Methodology

Sampling and Data Collection

The data for the current research were collected from the consumers of hotel industry visiting Star Category hotels of National Capital Region(NCR). Survey was conducted with the use of structured questionnaire covering all the aspects of objectives of the study. For data collection, structured questionnaire was distributed to respondents through online platform using Google Forms. Questionnaire was divided into three sections. First section was based on demographic profile of respondents. Second section consisted closed ended questions on influence of eco-friendly practices followed by star category hotels on consumers selection of hotels. Third section consisted open ended question on various suggestive measures given by respondents of hotel industry. Closed ended questions of second section were framed on a Likert scale of 1-5 where 1 indicates not at all influential, 2 indicates slightly influential, 3 indicates somewhat influential, 4 indicates moderately influential and 5 indicates extremely influential. The survey was conducted in the month of January, 2021. The primary sources of data collection is structured questionnaire and secondary sources of information are Government reports, national and international journals, theses, published research articles, websites, books, newspapers, magazines etc.

Analysis And Findings

Table 1: Demographic profile of respondents

Variables

Gender	Male	50.3
	Female	50.7
	Preferred not to say	---



Age	18-30 years	72.7
	31-40 years	17.9
	41-50 years	5.4
	51-60 years	1.0
	Above 60 years	1.1
Marital Status	Single	76.3
	Married	22.8
	Preferred not to say	0.9
Educational Qualifications	Undergraduate	31.9
	Graduate	14.8
	Postgraduate	49.6
	Doctorate	2.7
	Other	---
Occupation	Students	30.2
	Government Job	31.5
	Private Job	24.3
	Self Employed	7.5
	Others	6.5
Annual Income	Not earning	39.3
	Upto 3 Lakh	17.8
	3-6 Lakhs	23.4
	6-10 Lakhs	12.1
	More than 10 Lakhs	7.5

Identification of Various Eco Friendly Practices followed by Star Category Hotels of NCR

From the review of past literature it has been found that hotels adopt various Eco Friendly Practices in their daily operations like using solar panels for generating energy, Using occupancy sensors which automatically detect the occupancy and then accordingly adjust the temperature of the premises, electronic key card is useful to save electricity as all the electrical equipment's in the guest room turned on only if guest punch their electronic key card and they will be switched off immediately as soon as guest take out their card from that slot, Energy efficient lighting system along with energy efficient appliances including Light emitting Diodes (LED) are very useful in saving energy.

Linen Recycling, Using water sprinklers and Rain water harvesting, Water Recycling programmes and installing dual flush in toilets are the major water saving techniques.

Eco friendly room amenities, recycling bins in guest rooms and wall fixed dispensers for dispensing various amenities such as shampoo and soap are few practices followed by hotels for reducing waste and implementing Green Menu



Card and donating left over food to various NGOs prevent the wastage of food.

Impact of Eco Friendly Practices followed by Star Category hotels of NCR on consumers Hotel Selection

From the study of past literature a list of commonly used eco-friendly practices adopted by hotels was formed Thus, to achieve the second objective which is based on to analyse the Impact of Eco Friendly Practices on Consumers in the selection of star category hotels of NCR, aforementioned 101 responses has been considered. On a Likert scale of 1(Not at all influential) to 5 (Extremely Influential) surveyed star category hotel guests were asked to indicate that till what extent Eco -Friendly Practices followed by star category hotel influence them to select hotels. Table 2 represents the total weighted score and weighted mean score of tools of Eco – friendly Strategies adopted by hotels.

From the weighted mean score, it has been found that most influential Eco Friendly Practice adopted by hotels to influence guests is Energy Efficient Lighting System (Weighted Mean Score= 4.31) followed by Energy efficient appliances (Weighted Mean Score= 4.27) and Rainwater Harvesting (Weighted Mean Score= 4.16). Various Eco-Friendly Practice which moderately influence guests are Recycling of Water (Weighted Mean Score= 4.15), Eco Friendly Room Amenities (Weighted Mean Score= 4.14), Solar Panels (Weighted Mean Score= 4.06), Linen Recycle Ranked 7th (Weighted Mean Score= 4.04), Recycling Bins in Guest Rooms Ranked 8th (Weighted Mean Score= 4.04), Green Menu ranked 9th (weighted Average =4.01) in this sequence.

The two Eco -Friendly Practice which has least influence on Selection of Hotel are Dual Flush in Toilets (Weighted Mean Score= 3.81) and Occupancy Sensors (Weighted Mean Score = 3.71)

Table 2. Influence of Eco-Friendly Practice Followed by Star Category of Hotels on Individuals

ECO-FRIENDLY PRACTICES	Not at all influential (1)	Slightly influential(2)	somewhat influential(3)	moderately influential(4)	extremely influential(5)	total	weighted total	weighted mean	Rank
Solar Panels	6	10	34	66	86	202	822	4.069307	6
Occupancy Sensors	4	14	64	74	46	202	750	3.712871	14
Electronic Key card	2	14	48	60	78	202	804	3.980198	10
Energy efficient lighting system	4	2	24	68	104	202	872	4.316832	1
Energy efficient appliances	4	4	24	70	100	202	864	4.277228	2
Linen Recycle	2	6	46	72	76	202	820	4.059406	7
Use of water Sprinklers	4	10	40	86	62	202	798	3.950495	11
Rainwater Harvesting	4	6	38	58	96	202	842	4.168317	3
Recycling of water	4	4	38	66	90	202	840	4.158416	4
Dual flush in bathroom	10	8	52	72	60	202	770	3.811881	13
Eco-friendly room amenities	2	8	28	84	80	202	838	4.148515	5
Recycling bins in guestrooms	4	4	46	72	76	202	818	4.049505	8
wall fixed dispensers	10	6	48	72	66	202	784	3.881188	12
Green menu	4	10	38	76	74	202	812	4.019802	9
donating leftover food	2	8	34	72	86	202	836	4.148515	5

Suggestive measures for the enhancement of eco-friendly practices followed by star category Hotels of NCR



On the basis of the data collected from an structured questionnaire using google forms, Various measures suggested by the respondents for the enhancement of eco – friendly practices followed by star category Hotels of NCR are as follows :

1. Hotels must take green certification as it increases consumers trust towards eco friendly hotels practices.
2. Encourage & Educate guests as well as staff members to follow Eco – Friendly Practices
3. “Best out of waste” practices should be followed in hotels. In daytime , electricity should have minimal Use
4. The guests must be made familiar with eco-friendly appliances fixed in the hotel and should be encouraged to use and adopt eco-friendly practices in their life too as a gesture of social responsibility towards society.
5. Plantation of trees, sources of natural water, electrically operated car in side the hotel campus must be promoted in Hotels, Open Terrace should be decorated with ornamental live plants, other than guest rooms, To avoid sound pollution no loud music should be allowed within the hotel premises. For cigarette smoker a separate smoking zone could have been provided. Front side of the hotel should have green lawn with flowers garden and the backyards of the hotel should have vegetables and fruits garden to support “Green & Organic Menu Practices”
6. Change and replace the room amenities on guest demand only and Use only organic room amenities.

Conclusion

The first objective of the present study was to Identify various Eco Friendly Practices followed in Star Category Hotels. The findings revealed that solar panels are used for generating alternative source of energy, Using occupancy sensors which automatically detect the occupancy and then accordingly adjust the temperature of the premises, electronic key card is useful to save electricity as all the electrical equipment’s in the guest room turned on only if guest punch their electronic key card and they will switched off immediately as soon as guest take out there card from that slot, Energy efficient lighting system along with energy efficient appliances including Light emitting Diodes (LED) are very useful in saving energy. Linen Recycling, Using water sprinklers and Rain water harvesting, Water Recycling programmes and installing dual flush in toilets are the major water saving techniques. Eco friendly room amenities, recycling bins in guest rooms and wall fixed dispensers for dispensing various amenities such as shampoo and soap are few practices followed by hotels for reducing waste and implementing Green Menu Card and donating left over food to various NGOs prevent the wastage of food.

Second objective of the study was To analyse the Impact of Eco Friendly Practices on Consumers in the selection of star category hotels of NCR. The

findings of second objective stated that Energy Efficient Lighting System, Energy Efficient Appliances and Rain Water Harvesting are the major practices that mostly influence consumers in the Eco Friendly Hotel Selection of Delhi NCR Region whereas Installing Dual Flush System in Washrooms and Installing Occupancy Sensors in Hotel Premises which has least

influence consumers in the Eco Friendly Hotel Selection of Delhi NCR Region.

The third objective of the study was To suggest the measures for the enhancement of Eco friendly practices followed by star category hotels of NCR. The finding of the third objective revealed that Hotels must take green certification as it increases consumers trust towards Eco friendly hotels practices, Training of staff on sustainable practices should be Implemented, Best out of waste practices should be followed in hotels, There is the Need of Increasing awareness how to use Eco-friendly Amenities, Products and practices in the various hotels for housekeeping department and whatever the Practices we will follow it must Promote Guest Comfort In a Tangible Way.



Limitations And Ssuggestions For Future Research

The present research has three major limitations. Firstly, the survey was conducted during COVID pandemic; therefore, perceptions of respondents may vary during normal condition. Secondly, sample covered only 101 respondents, which is too small for highly populated country like India and therefore findings may vary if sample size could have been large. Thirdly, this study have considered impact of Eco Friendly Practices on Consumers Followed by Star Category of Hotels only, therefore, findings cannot be generalised for other segments of Hotels such as Independent Properties, Heritage Hotels. Thus, future researches can be conducted on the impact of Eco Friendly Practices on Consumers followed by Heritage Hotels.

References

- Ali, Y., Mustafa, M., Al-Mashaqbah, S., Mashal, K., & Mohsen, M. (2008). Potential of energy savings in the hotel sector in Jordan. *Energy Conversion and Management*, 49(11), 3391-3397.
- Amandeep. (2017). Green hotels and sustainable hotel operations in India. *International Journal of Management and Social Sciences Research (IJMSSR)*, 6(2), 13-16
- Chand, M., & Garge, S. (2017). Eco Friendly Practices in Indian Hotel Industry: An Exploratory Study. *International Journal of Hospitality & Tourism Systems*, 10(1).
- Chand, M., & Garge, S. (2017). Eco Friendly Practices in Indian Hotel Industry: An Exploratory Study.
- Garg, V., & Bansal, N. K. (2000). Smart occupancy sensors to reduce energy consumption. *Energy and Buildings*, 32(1), 81-87.
- Gössling, S., Araña, J. E., & Aguiar-Quintana, J. T. (2019). Towel reuse in hotels: Importance of normative appeal designs. *Tourism Management*, 70, 273-283.
- Iwanowski, K., & Rushmore, C. (1994). Introducing the eco-friendly hotel: There are lots of reasons to pay attention to eco-tourism and, let's face it, the main ones have to do with money. *Cornell Hotel and Restaurant Administration Quarterly*, 35(1), 34-38.
- Jauhari, V., & Manaktola, K. (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International journal of contemporary hospitality management*.
- Kalafatis, S. P., Pollard, M., East, R., & Tsogas, M. H. (1999). Green marketing and Ajzen's theory of planned behavior: A cross-market examination. *Journal of Consumer Marketing*, 16(5), 441– 460
- Landman,P.(2020). Green Hotel. Retrieved Feb 02.2020 from <https://www.xotels.com/en/glossary/green-hotel/>
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503– 520
- Ministry of Tourism, GOI.(2020).Indian Tourism at a glance 2020. Retrived Feb 02.2020 from https://tourism.gov.in/sites/default/files/2020-09/ITS%20at%20a%20glance_Book%20%282%29.pdf
- Namkung, Y., & Jang, S. (2017). Are consumers willing to pay more for green practices at restaurants?. *Journal of Hospitality & Tourism Research*, 41(3), 329-356.
- Rahman, I., Reynolds, D., & Svaren, S. (2012). How “green” are North American hotels?An exploration of lowcost adoption practices. *International Journal of Hospitality Management*, 31(3), 720-727
- Singh, N., Cranage, D., & Lee, S. (2014). Green strategies for hotels: Estimation of recycling benefits. *International Journal of Hospitality Management*, 43, 13-22.



- Subbiah, K., & Kannan, S. (2011, December). The eco-friendly management of hotel industry. In *International Conference on Green technology and environmental Conservation (GTEC-2011)* (pp. 285-290). IEEE.
- Thao, N. T. P. (2017). The relationship between eco-friendly practices and attitudes toward green hotels for domestic tourists. *VNU Journal of Science: Economics and Business*, 33(2).
- Tiwari, S., Dambhare, A., & Tripathi, R. Eco-Friendly Practices in Star Category Hotels of Lucknow: An Exploratory Study.
- Tsoutsos, T., Frantzeskaki, N., & Gekas, V. (2005). Environmental impacts from the solar energy technologies. *Energy policy*, 33(3), 289-296.
- Verma, V. K., & Chandra, B. (2016). Hotel guest's perception and choice dynamics for green hotel attribute: A mix method approach. *Indian Journal of Science and Technology*, 9(5), 1-9.
- Wan, Y. K. P., Chan, S. H. J., & Huang, H. L. W. (2017). Environmental awareness, initiatives and performance in the hotel industry of Macau. *Tourism Review*.
- Waris, I., & Hameed, I. (2020). An empirical study of consumers intention to purchase energy efficient appliances. *Social Responsibility Journal*.
- Waris, I., & Hameed, I. (2020). Promoting environmentally sustainable consumption behavior: an empirical evaluation of purchase intention of energy-efficient appliances. *Energy Efficiency*, 13(8), 1653-1664.
- Yi, S., Li, X., & Jai, T. M. (2018). Hotel guests' perception of best green practices: A content analysis of online reviews. *Tourism and Hospitality Research*, 18(2), 191-202.
- Zhu, Q., & Sarkis, J. (2006). An inter-sectoral comparison of green supply chain management in China: drivers and practices. *Journal of Cleaner Production*, 14(5), 472-486.