

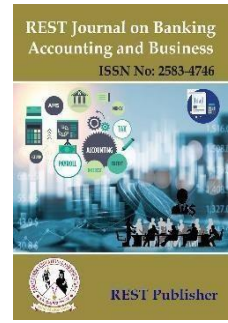


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Solid Waste Management Practices of Hotels in Tourism Industry

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Abstract: *Current study attempts to study the solid waste management practices and managers attitude towards the implementation of such waste management practices. The study investigates about solid waste management practices, sources of wastes, attitude of managers and barriers in the way of implementation of these practices. Data were collected 50 managers of hotels from tourism sector. The collected data were analysed with the use of SPSS software. From the study it is found that, managers have better attitude towards the adoption of practices but, the attitude changes on the basis of change in rating of hotels. And another important finding reveals that the hotels show consistency in implementation of reduction practices but less dependence can be seen in reuse and recycling practices. This may be because of the obstacles said by the hotels. Most of them depends recycling centres than implementing a recycling program within the hotels. Government rules should be strong enough, which will change the overall attitude of hotels towards the implementation of waste management practices. Both the local authorities and management need to undertake steps to give training and knowledge to the employees. Equal demand is there for recycling centres as government rules. Authorities should be serious about installation of recycling centres. Introduction of strong rules and installation of recycling centres will eventually change overall attitude and adoption of practices by the hotels.*

Key words: *Solid Waste Management Practices, Tourism Sector, Hotels, Managers Attitude*

1.INTRODUCTION

Solid waste is the undesired or unusable solid material produced by a combination of household, industrial, and commercial operations. Scientific solid waste management has so many positives like economic development, enhanced standard of living etc., and also the lack of such practice will result to negative impact to both environment and human. Effective solid waste management reduces or eliminates negative environmental and human health impacts, while also promoting economic development and enhanced quality of life. Solid waste is typically composed of cardboard, paper, plastic, metal, glass, cloth, wood, and organic (non-food) materials, as well as major objects like electronics and furniture. Under tourism industry, hotel industry considered as the biggest sub part with the greatest environmental impact. It is also predicted that the average tourist generates more than one kilogramme of waste each day. Generated waste quantity, however, determined by hotel size and its style, also availability services management of waste. According to International IHEI (2002), biggest negative environmental impacts were created by small size hotels. of hotels. Despite this, hotels frequently ignore their environmental duties and rely heavily on landfill as a key trash disposal strategy. Inadequacy of cash, bad decisions taken and less understanding about waste management. incorrect and unscientific management of waste will negatively affect the surroundings. Waste disposal at landfills frequently results in leaching, which pollutes subsurface water supplies. Landfilling also emits greenhouse gases like methane and creates ugly circumstances with health repercussions. There are numerous factors that influence the increase in solid waste. The size of the firm, service quality, years of establishment, management willingness, and other factors all have an impact on waste management implementation. There are numerous proven tactics and ways for dealing with the waste management challenge. Despite the fact that successful implementation has not yet occurred. Kerala is one of India's most popular tourist destinations. The state is inundated with both domestic and international tourists. Increased visitor numbers result

in increased garbage creation. Furthermore, waste management has become Kerala's big challenge due to lack of viable waste management system. It considered as the necessary action which should be taken by the Local Government Bodies. However, fail in planning, anticipate developing risks, a lack of training for non-governmental organizations, a lack of adequate technology, and other factors have contributed to the problem's fast growth. At this point, the study is being undertaken to determine the impact of solid waste management practices in the hotel business and the success of implementation. In addition, the study focused on the hurdles to practice and managers' attitudes towards implementation.

Significance of the Study: The increasing number of hotels and tourists generate that much rubbish for the environment. The majority of business units do not have a scientific waste management programmed in place. This could lead to environmental difficulties such as pollution and resource depletion, as well as economic damage. There are numerous proven tactics and ways for dealing with the waste management challenge. Despite the fact that successful implementation has not yet occurred. Kerala is one of India's most popular tourist destinations. The state is inundated with both domestic and international tourists. Of the case of Kerala Waste management has been a big concern mainly because inadequate waste management model. It is the necessary step taken by the Local Government Bodies but there are some barriers which make hindrance to this, they are fail in planning, anticipate developing risks, a lack of training for non-governmental organizations, a lack of adequate technology, and other factors have contributed to the problem's fast growth. This study tries to study about the solid waste management practices adopted by hotels in organised tourism industry of Kerala. Hotel ownership and cooperation of management and employees matters in waste management (Pramono, n.d.). So, the study also tries to analyse the attitude of managers towards implementation of solid waste management and the challenges faced by the hotel industry. The study will help the governmental agencies to find out the barriers in front of hotels with regards to waste management and formulating policies to support the effective implementation. This will also help the managers of hotels to get to know about the effective strategies in the implementation. And finally, this adds new insights to the literature.

Objectives of the study

- To find out the practices followed by the industry.
- Effectiveness of the implementation.
- Managers attitude against implementation of solid waste management practices.
- Barriers against solid waste management practices.

Research Design: The study has done as descriptive one to understand current situation about the specific area by the researcher. The data were collected by using convenient sampling from hotels in Malappuram district. Samples consists 50 hotels in organised sector. List of hotels were drawn from the site of ministry of Kerala tourism. Structured questionnaire was adopted for the collecting data from the respondents. The questionnaire districted as three parts first part consists demographic profile of the manger and details of the hotel units, second part discuss the solid wate management practices, and final part consists barriers in implementation of solid waste management practices. Analysis of collected data were done with the help of IBM SPSS statistics.

2. RESULTS AND DISCUSSION

TABLE 1. Sources of waste generation

Source	Mean	Std. Deviation
Rooms	1.48	0.839
Garden	4.78	2.288
Restaurant	5.42	2.001
Kitchen	4.96	1.196
Laundry	3.70	1.266

Office	3.76	1.944
Store	3.90	1.249

Sources of Data: Primary Data

Major source of waste is attached restaurant ($Mean=5.42$) of hotels which have this service and hotels which has no restaurant service says kitchen ($Mean=4.96$) as the main source. Second major source is the garden ($Mean=4.78$) of the hotel units. The areas of stores ($Mean=3.90$), laundry ($Mean=3.70$), and office ($Mean=3.76$) almost equally stands as following major areas of waste generation. Rooms produces considerably lesser wastes than others.

TABLE 2. Age and Managers attitude towards implementation of solid waste management practices

H0: There is no significant difference between age group and managers attitude against implementation of solid waste management practices.

Age	Mean	SD	F value	P value
Below 25	4.10	.316	.546	.583*
26-35	4.29	.465		
36-45	4.23	.734		

Source: Primary Data

Since P value is greater than 0.05, the null hypothesis is accepted at 5% level of significance. Hence it is concluded that there is no significant difference between age group and managers attitude against implementation of solid waste management practices. Which means managers in all age category have almost same attitude towards solid waste management practices' implementation.

TABLE 3. Qualification and Managers Attitude

H0: There is no significant difference between qualification and managers attitude against implementation of solid waste management practices.

Qualification	Mean	SD	F value	P value
Graduated	3.97	.370	4.912	.005*
Postgraduate	4.42	.559		
BSc Hotel Management	4.52	.395		
Diploma in Hotel Management	4.00	.000		

Source: Primary Data

Since P value is less than 0.05, H0 is rejected at 5% level of significance. Hence it was concluded that there is significant difference between qualification and managers attitude against implementation of solid waste management practices. Managers who have qualified BSC Hotel management ($Mean=4.52$) shows high positive attitude towards the implementation. Likewise, Managers who qualified Post graduate ($Mean=4.42$) also shows better attitude. Managers with Diploma in Hotel management is also showing significant attitude than who has just qualified graduation.

TABLE 4. Class of the Hotel and Managers Attitude

H0: There is no significant difference between class of the hotel and managers attitude against implementation of solid waste management practices.

Class of the hotel	Mean	SD	F value	P value
Residency	3.95	.308	12.47	.000*
Suites	4.37	.750		
3 Star	4.56	.281		
4 Star	5.00	.000		

Source: Primary Data

The value shows less than 0.05 at 5% significance level, so that the null hypothesis is rejected. Which means there is significant difference between various class of the hotel and managers attitude level. With the increasing start rating of hotels, there is increase in positive attitude of managers. Managers of 4 star and 3 star rated hotels shows high attitude towards adoption of solid waste management practices.

TABLE 5. Class of the Hotel and Solid Waste management practices

Solid waste management practices	Mean	SD
Reduction practices		
Usage of non-disposable crockery	1.38	.490
Usage of environment friendly detergents and equipment	1.44	.501
Usage of energy efficient equipment and products	1.34	.479
Purchase in bulk to reduce the need for packaging	1.34	.479
Avoid unnecessary photo copying	1.46	.503
Printing on both sides of paper	1.44	.492
Avoid over preparation at kitchen	1.29	.465
Usage of returnable containers	1.22	.418
Receiving supplies in reusable containers	1.28	.454
Reusing practices		
Reuse papers, crates, bottles, cans, and plastic materials	1.26	.443

Use of reusable bags and containers for purchasing	1.18	.388
Repair and use broken equipment instead of purchasing anew one	1.58	.499
Donate left over food to charity	1.38	.490
Installation of reusable soap and shampoo dispensers	1.80	.404
Reuse as raw material for other wooden products	1.14	.351
Reuse of old linen as cleaning clothes	1.62	.490
Recycling practices		
Implement a recycling program	1.28	.454
Use of recycled products	1.22	.418
Producing brochures and publicity material on recycled paper	1.14	.351
Sort waste in to paper, glass, plastic etc	1.18	.388
Sending waste in to recycling plant	1.90	.523

Sources: Primary Data

The results show, reduction practices are consistently adopted by the hotels. From the reduction practices usage of environment friendly products ($mean=1.44$), avoid unnecessary photo copying ($mean=1.46$) and printing both sides of the paper to reduce paper wastes ($mean=1.44$) are the highlighting practices which is followed by the hotels. The practices on which the hotels can more control is consistently adopted by the hotels, but in the case of usage of returnable containers and receiving supplies in reusable things are the practices which have more influence from the part of supply. So, the hotels may depend such things on the basis of availability. Most of the practices which present Infront of respondents have better mean value. Most of the reusable practices are adopted by the hotels sufficiently than two or three practices such as Use of reusable bags and containers for purchasing ($mean=1.18$), and Reuse as raw material for other wooden products ($mean=1.14$). Most following practices are Installation of reusable soap and shampoo dispensers ($mean=1.80$), Reuse of old linen as cleaning clothes ($mean=1.62$) and Repair and use broken equipment instead of purchasing anew one ($mean=1.58$). It is inferred that hotels are takes less effort to recycling activities except sending the wastes to recycling centres ($Mean=1.90$). all other practices carry less mean value. Which means those practices are not much entertained by the hotels in tourism industry.

TABLE 6. Obstacles to implement solid waste management practices

Obstacles in Implementation of SWMP	Mean	SD
Lack of time of managers and employees because it's additional job	2.52	.614
High cost	2.40	.606
Weak government enforcement rule	2.28	.497

Lack of written environmental policies	2.52	.544
Regular monitoring is rare	2.58	.538
Lack of knowledge of employees	2.36	.525
No special space for waste management	2.48	.505
Lack of recycling centres	2.56	.541
Do not have a department dealing with environmental issues	2.36	.525

Source: Primary Data

From the results, lack of regular monitoring ($mean=2.58$), lack of recycling centres ($mean=2.56$), and lack of sufficient time ($mean=2.52$) are thought about as the major barriers in the way of implementation of solid waste management practices. Additional cost ($mean=2.40$) for adopting such practices and availability of space ($mean=2.48$) issue comes only after these things. Employment knowledge and demand for departments which deals the environmental issues are not pin point as significant issues.

3. CONCLUSION

Tourism sector is considered as sunrising sector in anywhere. It is undoubtful that tourism sector in always booming one and it has sufficient contributions to the nation irrespective of whether it is developed or developing nation. But at the same time, it has some environmental impacts too. Hospitality industry from tourism sector holds serious threat to the environment because, it is observed as one of the major waste generation sources to the sector. Hotels are major pillar to the hospitality industry. In addition to growing number of tourists the attitude of managers also effects the adoption of waste management practices. That is why this study attempts to study about solid waste management practices and managers attitude towards the implementation. There are various sources of waste generation in the hotel, from which restaurants, if any, kitchen and gardens are the major sources of waste. When it analyses the attitude of managers. All of them shows better attitude even though, it can be seen that the attitude of managers changes as the class of the hotel changes. High rated hotels' managers hold better attitude than low rated ones. When it comes to the practices, all hotels have consistency in the adoption of reduction practices but less focus have been given to the recycling practices. All of them just depends the recycling centres. But the fact is there is lack of recycling centres. The major second most issue said by the hotels is lack of recycling centres after lack of regular monitoring

Recommendation: Government rules should be strong enough, which will change the overall attitude of hotels towards the implementation of waste management practices. Since it is very important to revise and strengthen the rules by the government. Because Kerala is one of the states which attracts foreign tourists. They give very importance to cleanliness. And it is also needed to change the attitude of every unit. authorities should be educated the hotel units about benefits arisen out of proper waste management. Both the local authorities and management need to undertake steps to give training and knowledge to the employees. Equal demand is there for recycling centres as government rules. Authorities should be serious about installation of recycling centres. Most of the units depends on recycling centres. So that the installation of recycling centres will help to reduce the more waste generation and also aids to manage wastes properly.

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