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Greening the Hotel Operations: Puerto Princesa Experience

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Abstract *- The study was conducted to assess the extent of implementation of green practices in the housekeeping and food and beverage departments among standard hotels in Puerto Princesa City, Palawan with respect to solid waste management, water conservation and energy utilization.*

The descriptive design was utilized in this research. Respondents of this study were the supervisors and staff of the Housekeeping and Food and Beverage Departments of the 13 standard hotels in Puerto Princesa City. Using total enumeration, 52 hoteliers were asked to answer the survey questionnaire to be able to come up with data needed in the study. Frequency counts, percentages, means and Analysis of Variance were used to interpret and analyze the data gathered.

Among the three groups of green practices included in the study, solid waste management obtained the highest mean for both the housekeeping department and food and beverage department which indicates that green practices under this category are the most extensively implemented.

Conversely, respondents from the housekeeping department rated green practices related to energy utilization as the least implemented while food and beverage department respondents revealed that green practices pertaining to water conservation are the least implemented.

Using one way analysis of variance (ANOVA), the responses revealed that there is no significant difference in the extent of implementation of green practices in all the three categories that were studied within hotels. However, a significant difference among hotels was found out when it comes to the extent of implementation of green practices for the same categories.

Keywords *– Green Practices, Puerto Princesa City, Housekeeping Department, Food and Beverage Department*

I. INTRODUCTION

Philippines, although a relatively minor contributor of global greenhouse gases, is nevertheless, highly vulnerable to the impacts of climate change because of its location, geography, and vulnerability to periodic El Niño and La Niña climatic effects (Rincon, 2008). Among the known effects of climate change are the increase in frequency and intensity of heat-waves, floods, droughts and typhoons (Rincon, 2008). In a span of only 20 years, the country had been seen to have increased its sea levels three times the rate of the rest of the world.

In places where such exceptionally destructive phenomenon occurs, people and properties, including businesses are adversely affected. The impact on the economy is especially felt by main industries like hotels and tourism-based enterprises. As one of the biggest industries worldwide, hotels are currently getting more and more concerned about the same environmental issues. As the hospitality industry is energy- and water-intensive in its operation, the more it is now considered as a significant player in increasing global warming. Bohdanowicz and Martinac (2007) indicated that 75% of environmental pollution caused by hotel industry was from over-consuming energy, water, and materials while operating their business. The waste water, fume, and materials discharged during the operation had caused negative impacts on our environment. Studies reveal that the three key areas of environmental impact are energy, water, and waste.

Thus, without policies that support the implementation of appropriate green practices, hotels could add to the adverse impact of intensive energy and water use as well as increase in wastes that go back to the environment. The concept of environment protection and energy saving can introduce green management into hotel facility construction. If hotel industry can put the idea of green management into

practice through specific actionable policies, not only can it benefit the environment and the eco system, it would also reduce hotel operation cost. Moreover, with policies in place, the same maybe used in launching what is known as green marketing, thereby potentially attract more consumers who are keen about the same ideal (Chen, 2012).

Among all Philippine provinces, Palawan stands out environmentally because of its status as a major repository of biological diversity as well as an ecologically sensitive area. It was hailed as the country's Last Ecological Frontier and a UNESCO Biosphere Reserve. Its capital, Puerto Princesa City, was transformed into one of the more famous eco-tourism destinations within the country and throughout the world. The city is a global model for environment protection, elevating it into the Hall of Fame as the Philippines' "cleanest and greenest" component city and winning several global recognition and awards in the process. It has the largest forest cover as well as the healthiest coral reef cover. The United Nations declared it as a "Biosphere Reserve" while the world's Intergovernmental Panel on Climate Change awarded it as the first carbon neutral city in the Philippines when in fact it is significantly a carbon negative environment.

This reputation has given rise to a unique law called the Strategic Environmental Plan for Palawan (SEP Law). The centerpiece of the SEP Law is the creation of an Environmentally Critical Areas Network (ECAN), basically a zoning system that divides each of the province's 23 towns and the capital city into core zones, buffer zones and multiple use zones. Under the SEP law, equitable access to resources is emphasized and local community management is encouraged. Ecological viability and social acceptability of development projects are given importance.

With all the facts mentioned above about the Philippines' vulnerability to the adverse effects of climate change, the hospitality industry's contribution in increasing global warming due to its over-consumption of energy and Puerto Princesa's attempt to continue being in charge in the protection and conservation of its natural resources through the help of the SEP Law and the commitment of Palawenos to preserve its environment, it has become inevitable to make use of a system that would help the hotel management make these pieces of information known to everyone working in the company.

It is on this note that the researcher has decided to conduct a study on the extent of implementation of green practices among standard hotels in Puerto Princesa City. Since there have already been a number of studies that were conducted here and abroad on this topic, it is high time to conduct the same study in the Philippine's Last Ecological Frontier.

II. OBJECTIVES OF THE STUDY

This study aimed to determine the extent of implementation of green practices in the housekeeping and food and beverage department among standard hotels in Puerto Princesa City with respect to solid waste management, water conservation, and energy utilization; and to find out if there a significant difference within and among the standard hotels in the extent of their implementation of green practices.

III. METHODS

The study had a total of 52 respondents. One supervisor and one staff from the housekeeping department and another set from the food and beverage department of the 13 standard hotels in Puerto Princesa City were asked to answer the questionnaire. The survey instrument or questionnaire was patterned by the researcher after the Green Business Standards Checklist for Hotels and Resorts which was developed by the Bay Area Green Business Program and the Best Environmental Practices for the Hotel Industry made by Sustainable Business Associates group.

Green practices were divided into three categories namely; solid waste management, energy utilization and water conservation. The hotel supervisors and staff from both housekeeping and food and beverage departments were asked to rate green practices listed under the three identified categories according to the extent by which they are implemented in the hotel. The following rating scale was used: 5 - Always implemented (100% of the time); 4 - Most of the time implemented (61% to 99% of the time); 3 – Sometimes implemented (31% to 60% of the time); 2 – Rarely implemented (1% to 30% of the time); and 1 - Not yet implemented (0% all the time).

In order to determine the extent of implementation of green practices, the weighted mean of the individual responses of the hoteliers was computed per statement based on the response scale of 1-5. Finally, the results were ranked from highest to lowest for all the three different categories.

IV. RESULTS AND DISCUSSION

Extent of Implementation of Green Practices in the Housekeeping Department

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In this study, data show that among the solid waste management practices implemented in the housekeeping department, the two statements that got the highest mean were: *"Implement a hotel-wide recovery and recycling program of fiber, cardboard, mixed paper, newspapers, and office paper"* and *"Designate a space to store all recyclables including plastic (MRF)".* Recycling seems to be a common practice among standard hotels in Puerto Princesa City. It is, however, interesting to note that although hotels are most commonly implementing recycling program, the statement "*Provide guestroom recycler baskets for newspaper, white paper, glass, bottles, aluminum, cardboard, plastics, etc."* got the lowest rank among the solid waste practices rated by the hoteliers. This indicates that the guests are not active participants in the recycling process being done by hotels. It is the staff of the housekeeping department that is tasked to segregate and recycle the solid wastes from the guest rooms. Guest rooms are not normally designed to contain several receptacles for solid waste disposal. Hotel operators design programs and policies to contribute to the overall comfort and convenience of guests during their brief stay and not the other way around. It is not their task to separate although, the hotel may post an information in the guestrooms about the hotel's segregation and recycling practice as part of its information and advocacy campaign.

As for the green practices pertaining to water conservation, the top two statements that got the highest weighted mean were as follows: *"Sort laundry according to the degree of soiling, so that only the dirtiest items are washed intensively"* (x = 4.62) and *"Remind guests and employees against leaving taps open when not in use"* (x = 4.54). These two statements reflect the two most commonly implemented water conservation green practices that were observed by the supervisors and the staff in the housekeeping department. This may be due to the simplicity of these tasks that's why they were implemented most of the time.

On the other hand, the green practices that earned the lowest weighted mean are: *"Install water-saving devices in appropriate places (flow regulators, water flow sensors, self-closing taps, low-flush toilets, etc.)"* and *"Advise the laundry staff to recover the rinse water from relatively unsoiled loads for the next cycle's prewash and wash load".* The former statement is mainly about the absence of water saving devices that can control the water flow. This can be easily solved through purchasing such equipment in order to save more water and cut down the water bill. As for the second statement, proper training as well as commitment to the advocacy in water conservation could be the keys to implement this green practice.

For the last category which is energy utilization, the top 2 most observed or implemented green practices were the following: *"Remind guests to turn off the television when no one is watching a program or show"* and *"Use automatic cardkeys to open lights and other utilities so that when they leave, rooms do not use additional energy".* These practices are widely practiced among the hotels in Puerto Princesa. In fact, some hotels even have some sort of signage that encourages guests to switch off the appliances that are run by electricity before they leave the room. Moreover, all housekeeping personnel know this as a hotel policy that prohibits them from turning on the television while they are doing the room make up or cleaning the check out room. On the same note, hotels have invested some of its money in the installation of card key controlled lights and other utilities because they know that this is one of the effective ways to reduce their electric bill.

Extent of Implementation of Green Practices in the Food and Beverage Department

In the Food and Beverage department particularly under the solid waste management category, the statement *"Practice "first-in, first-out" policy in the use of ingredients and food items"* obtained the highest weighted mean. This shows that kitchen personnel are extensively implementing the FIFO method as part of the company policy. In fact, 6 out of 13 hotels said that they follow this all the time and the remaining number of hotels does it most of the time. The green practice that yielded the second highest weighted mean is *"Use refillable containers for sugar, salt and pepper, and any other condiments used."* This practice is widely used not only in Puerto Princesa City but also worldwide as mentioned by the study of McPhee in 2006 and Micioni in 2009 . More and more hotels are switching to the use of refillable containers for condiments. Hotels are making an effort to stay away from those that are individually wrapped. With this, a huge amount of solid waste is reduced.

On the other hand, the least observed green practice pertaining to solid waste management is *"Track the volume of solid waste generated on a monthly basis"* which only got a mean of 3.92. This shows that hoteliers do not monitor regularly the amount of waste generated in their operations.

Meanwhile, in the energy utilization category, two statements obtained the highest weighted average and share the number 1 position. These statements are *"Open refrigerators and freezers only when necessary"* and *"Use cooking pots whose diameters are compatible with the cookers or burners."* Although the first statement may seem like a very menial task, its contribution to lowering the energy consumption of hotels, especially big ones, is enormous. It is therefore good to know that this is being practiced by hotels in Puerto Princesa City. On the same note, the result of this study showed that hoteliers believe that the use of appropriate kitchen equipment is helpful in effective utilization of energy.

Conversely, the *"Use of solar panels to heat water for the guest rooms"* received the lowest mean rating among all the green practices considered in the study (3.15). This may be due to the absence of such equipment in the standard hotels in the city.

Finally, the Food and Beverage department's most extensively observed green practices concerning water conservation are: *"Adjust the water flow according to the type of cleaning to be done"* and *"Report equipment and plumbing leaks to maintenance department immediately."* These two practices are both easy to do thus, making it the most extensively implemented green practices.

Comparison on the Extent of Implementation of Green Practices within and Among Standard Hotels in Puerto Princesa City

The hoteliers' ratings of green practices were computed and analyzed using Analysis of Variance. The analysis was based on the three categories of green practices as they are implemented in the hotel.

Housekeeping Department

In the housekeeping department, analysis of green practices pertaining to solid waste management showed that there is no significant difference (f-value=4.75) in the perception of hoteliers within all the hotels. However, results showed that there is a significant difference (F-value=2.69) in the extent of implementation of green practices among hotels. This indicates that the practices pertaining to solid waste management implemented within all the 13 hotels, as a whole, do not differ in the extent or degree of their implementation. The perception among the hotels is, however, significantly different which means that one hotel differed from another in their perception on the extent of implementation of the green practices. These perceptions are significant at .05 level which became the basis for rejecting the null hypothesis of the study.

The extent of implementation in relation to energy utilization standards that were practiced by hoteliers in the housekeeping department produced the same result as the first category. Data showed that within the target hotels, the practices were implemented on almost the same extent based on the computed ANOVA of the responses of the hoteliers. On the other hand, it was found out that there is a significant difference in the extent of implementation of the same practices among the 13 standard hotels.

A similar trend was found with respect to water conservation. Results revealed no significant difference on the extent of implementation of green practices within the 13 hotels but a significant difference exists among the 13 hotels. The results showed that the respondents within the hotels have the same perception about water conservation in the housekeeping department whereas different hotels had different views about the same category.

B. FOOD AND BEVERAGE DEPARTMENT

Aside from the housekeeping department, the food and beverage department was also part of the study. The analysis on the extent of implementation of green practices under the solid waste management category revealed that there is no significant difference within each of the 13 hotels whereas a significant difference was shown in the extent of implementation among them. This is explained by the almost similar responses of the respondents within the same hotel on the green practices pertaining to solid waste management thus, the null hypothesis is accepted. However, the opposite is true when it comes to the comparison among hotels.

With regard to energy utilization category in the food and beverage department of the hotels in the study, results exposed that there is no significant difference on the extent of implementation of green practices within hotels. However, among hotels, the analysis showed that there is a significant difference in the implementation of these same practices, allowing for the rejection of the null hypothesis.

As to water conservation standards, result of the study also exposed that there is no significant difference in the perception of respondents within hotels however rejection of the null hypothesis was made among hotels of the same category.

V. CONCLUSION

Based on the findings, the researcher therefore concludes that supervisors and staff of both the

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housekeeping and food and beverage departments agreed that the green practices pertaining to solid waste management were the most extensively implemented among the three categories that were studied.

In the housekeeping department, the responses of the hoteliers showed that green practices pertaining to energy utilization was the least implemented whereas, in the food and beverage department, green practices involving water conservation was the least implemented.

The results of this study conforms with the findings of earlier studies conducted by Simpao (2011) and Villapando (2013) which revealed that hotels in Metro Manila and Subic Bay Metropolitan Authority are greatly involved in energy management, water conservation and waste management practices.

As for the existence of similarity or difference in the extent of implementation of these green practices, statistical analysis revealed that there is no significant difference in the extent of implementation of green practices within each hotel. This indicates that the hoteliers within the hotel agree as to the extent of implementation of the green practices for all the three categories.

On the other hand, the result of this study showed that a significant difference exists in the extent of implementation of green practices among the 13 hotels. This illustrates the difference in the perception of the hoteliers from various hotels as to the extent of their implementation of green practices for the three categories.

In real practice, the standards followed by hotels in the food and beverage and housekeeping departments vary per hotel. No two hotels have exactly the same standards. The standards used per hotel are faithfully followed by all the hotel staff as shown by the results of the statistical analysis

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