

*Article History*  
Received 24 Dec 2020  
Reviewed 29 Jan 2021  
Revised 2 Feb 2021  
Accepted 20 Feb 2021

## **Employee perception on the environmental protection programmes: A case study of a luxury hotel in Macau**

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### **ABSTRACT**

This paper examined the luxury resort hotel employees' perspectives on the environmental protection programmes initiated by the hotels in Macau, China. The concern for environmental protection is increasing globally in the hospitality industry, especially for big hotels, as they rank highest among the energy consumers compared to the various sectors of the industry. Macao SAR, whose economy is highly dependent upon casinos that reside within numerous hotels, is being developed as a world tourism and leisure centre. This, in turn, further reinforces the need for the examination of environmental protection programmes. Data for this qualitative study was collected through in-depth semi-structured interviews with fifteen participants which were later analysed using the content analysis method. The result shows that the employees of the luxury resort hotel in Macau perceive variously of the performance of the green practices initiated by the hotel, albeit there was a consensus that additional effort on the part of the hotel was needed to further strengthen environmental protection programmes. The implications of this study and the direction for future research have been explained as well.

**Keywords:** *environmental protection; employees' perspectives; green hotel; green practices; luxury resort hotels; Macao*

### **1. INTRODUCTION**

Environmental protection is a global issue and has been a matter of concern in recent years. The present and future generations need a healthy environment to support their health and well-being (WCED, 1987). However, many regions in the world are suffering from global climate change, air and water pollution, and uncontrolled growth of energy consumption

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(Anand, 2013; Sovacool, 2014). There is a consensus that the generation of waste and pollution caused by the tourism industry has impacted the environment adversely in many countries (Bohdanowicz, 2005; Neto, 2003). Among various sectors of the tourism industry, hotels have been assumed to pose big threats to the natural environment because of their requirements for enormous consumption of environmental resources for its daily operations including water, energy, and non-renewable and non-sustainable products such as natural gas, oil, coal, and peat or conventional nuclear power (Bohdanowicz, 2005, 2006; Teng, Horng, Hu, Chien & Shen, 2012; Min, 2011; WCED, 1987). The more services and facilities hotels provide, the higher will be the level of negative environmental impact due to the increased use of those natural resources. Consequently, it is crucial and urgent for hotels to implement environmental protection programmes by reducing the amount of usage of limited resources and adopting new energy-saving technologies to limit the negative impacts and go green (Erdogan & Baris, 2007).

Apart from protecting the environment, implementing an environmental management system is also important for the sustainability of the hotel industry itself (Prud'homme & Raymond, 2013). Besides, it is important to implement environmental protection programmes to achieve the goals of corporate social responsibilities (CSR) in the hotel industry which is about the activities that firms should do in order to maintain ethical responsibilities towards society, and also to respect and protect the environment at the same time (Arbam & Jarzabek, 2016). By taking measures to protect the environment, hotels will not only minimize negative impacts on the natural environment but also support local communities (Arbam & Jarzabek, 2016).

Being a labour-intensive sector of the hospitality industry (Lai & Baum, 2005), hotels need many employees to support their daily operations. Hence, the behaviour, performance, and cooperation of their employees are important for the success and failure of the environmental protection programmes initiated by the hotels. Hotel employees' environmental-sensitive behaviours in the workplace are related to their perceptions on the environmental protection programmes and their personal environmental behaviours (Chou, 2014).

**Study Objective:** Therefore, this paper aims to examine the luxury resort hotel employees' perspective on the environmental protection initiatives undertaken by the hotel. The data for this study was collected from a luxury resort hotel in Macau .

Macao is a small gambling/ gaming city in Asia. The total area of Macao is 30.8 square kilometres (Macao Government Tourism Office, 2019) and the population is about 653,100 (DSEC, 2019). Despite its size, Macao has a well-developed tourism and hospitality industry where the average hotel occupancy rate has been over 80 percent, generally (DSEC, 2019). More recently, the Macao government is coordinating with The Country's Belt and Road (One belt one road) initiative which is initiated by the Chinese Government to build Macao as a "World Centre of Tourism and Leisure" in the coming 15 years (Macao Government Tourism Office, 2017). Therefore, it is expected that the tourism and hospitality industry in Macao will keep blooming if the plans go smoothly. According to the Office of the Development of the Energy Sector of the Macao SAR, the electricity consumption in the hotel industry in Macao accounts for forty percent of the total. Therefore, while tourism is growing, the extent of negative impacts brought forward by hotels is also expected to grow up. In 2017, there were 113 hotels and guesthouses in Macau . Of these 113 firms, 34 of them (30.1 percent) were 5-star hotels (DSEC, 2019). Hence, the luxury resort hotels in Macao are supposed to be the first ones to examine the extent of environmental protection programmes. Since environmental knowledge, environmental awareness and environmental concern are the drivers that affect employees' ecological behaviour and influence their willingness of going green, the success

of green practices initiated by hotels depends not only on the organization's attitude, also on the employees' personal opinions and behaviours (Chan, Hon, Chan, & Okumus, 2014).

Despite the importance of the hotel industry for the economy of Macao and their overwhelmingly increasing use of natural resources, very few studies have examined the situation of environmental protection and management in the hotel industry in Macau . More particularly, the perception of hotel employees about environmental protections has largely been neglected in the case of Macao. Wan, Chan, and Huang (2017) have investigated the awareness, initiatives, and performance of environmental protection in the hotel industry in Macao, however, the study lacks employees' perspective on environmental protection initiatives. This paper aims to fill this gap by exploring employees' views on the environmental protection initiatives by the luxury hotels in Macau .

## **2. LITERATURE REVIEW**

### **2.1 Environmental protection initiatives in the hospitality industry**

The hospitality organizations across the globe are increasingly being interested in and feel responsible for environmental protection (Erdogan & Baris, 2007). In 1972, the European Union started to develop policies and take action on environmental practices. They established legal infrastructures and minimum standards for air and water pollution and waste recycling for hotels (Erdogan & Baris, 2007). In 1992, the Rio Earth Summit declared that the tourism industry is one of the priority areas for sustainable development and recognized the importance of the hotel industry to go green (Bohdanowicz, 2006). Not only there are now stricter regulations about environmental protections in many countries, but hotels are also developing environmental guidelines and training programmes by themselves (Bohdanowicz, 2006).

Despite such enormous efforts, both on the policy as well as execution levels, for environmental protection, hotels in some countries lack sincerity in implementing such policies and programs. For example, Erdogan and Baris (2007) investigated the general nature and performance of environmental protection and conservation practices of hotels in Ankara, Turkey. They found out that environmental concern and awareness were lacking in the hotel industry in Ankara. 65% of the hotels did not have environmental programs, and 76.9% of hotels did not have responsible employees on environmental protection. Their research also found that environmental training and conservation guidelines to employees were also uncommon as only 15% of hotels provided employees training on this aspect. Although the government had adopted various legal regulations on environmental protection including the control of waste and energy used, most hotels in Ankara were not complying with the environmental regulations.

Some studies have suggested how environmental protection programmes can be initiated in the hotels. A study by Bohdanowicz, Zientara, and Novotna (2011) evaluated the environmental protection program in an international hotel chain – Hilton and suggested that the idea of Hilton's environmental protection program should not only save natural resources such as energy and water, and increase profits of the company by reducing costs, but also motivate and enhance employees' continuous environmental protection awareness and attitudes. They suggested that in order to maintain the sustainability of the program, hotels should encourage both staff and guests involved in the program in order to develop a positive environmental attitude, set goals and targets in order to ensure the programme is going on the right track, make the program fun to keep the green climate survives in the firm, adopt environmental management IT systems such as indicators to find out the usage of energy or

water per guest night, monitor the performance of the environmental aspect in the hotel, persuade business partners to go green and finally, find experienced organizations in initiating creative green projects to cooperate with for the environmental management in hotels.

The level of environmental awareness in hotels of Macau is high (Wan, Chan & Huang, 2017). As hoteliers see benefits of cost saving from environment protection systems, they actively initiate such programmes. The programme includes installing a water-conserving system, having a system to discover leaking facilities, and using energy-conserving light bulbs. However, facilities for reusing wastewater, recycling wasted food, and using solar energy are not included. As Wan, Chan, and Huang (2017) noted, the main obstacles to going green are financial issues, lack of government regulations on environmental management, lack of employees to manage EM, and concern about EM as it may negatively affect guest's experience especially those who have a high expectation of luxury services in luxury hotels in Macau (Wan, Chan & Huang, 2017).

## **2.2 Environmental protection and employees' responsibility**

Some existing studies (e.g., Chan, Hon, Chan, & Okumus, 2014; Chan & Hawkins, 2010; Chou, 2014; Ramus, 2001; Robertson & Barling, 2013) have examined employees' behaviours and their responsibilities in relations to environmental protection from a number of aspects. For example, while investing in environmental protection issues in hotels in Taiwan, Chou (2014) found that employees with weak senses of environmental protection needed a strong green climate and training to improve their environmental behaviour. In contrast, employees with strong senses of environmental issues could perform environmental behaviour very well without a green climate or training. It shows that as long as the personal environmental senses are high, a weak green climate in a hotel would not easily reduce employees' green behaviour.

A study by Chan, Hon, Chan, and Okumus (2014) has found that environmental knowledge, environmental awareness, and environmental concern are the drivers that affect employees' ecological behaviour and influence their willingness to go green. The study suggested that providing proper environmental training to employees and selecting the right people strengthen both the environmental performance and environmental image of the hotel. The success of green practices initiated by an organization depends not only on the organization's attitude but also on the employees' personal behaviour. As employees' environmental behaviour is important for success, the organization should do more to strengthen the engagement of employees in green practices on different aspects such as implementing environmental policies and providing environmental education for employees.

Chan and Hawkins (2010) studied the situation of the Environmental Management System (EMS) in an international hotel in Hong Kong SAR. The findings of the study suggested that applying EMS could increase employees' job satisfaction due to the feeling that they are protecting the earth, contributing towards society, being recognized by ISO 14001, and having a healthier ambiance in the workplace. However, employees' involvement and attitude on EMS could be negatively affected if the company sees EMS as means for saving costs, improving the company's reputation, and attracting green customers to benefit the business more than protecting the environment. The inconsistencies of EMS policies relating to the nature of the business and customers' demands would negatively affect employees' involvement and attitude on EMS as well.

Robertson and Barling (2013) examined the leaders' impacts on employees' pro-environmental passion and behaviours in an organization and found that when leaders' environmental norms and awareness (pro-environmental passion) were strong, they would

perform corresponding levels of pro-environmental behaviours in the workplace, bring the green concept, lead influences to subordinates' pro-environmental norms and awareness (pro-environmental passion) and the subordinates would perform corresponding behaviours in the workplace based on the levels of environmental norms and awareness they have. In addition, the study also found out that employees were more energetic to engage in the green programme when they were being in a green and positive working ambiance. Therefore, creating a green climate is important for going green in an organization. In a similar study, Ramus (2001) pointed out that to have a successful green innovation, although setting green policies was important, the key was to make sure that employees in management levels care about the green programme since they directly interacted with junior levels employees. Therefore, even if junior employees know about the programme and the policies, if their supervisors and managers do not support it, the employees are less likely to engage in the programme proactively. Therefore, setting green goals and clear green responsibilities are ways to let management levels employees know about the importance of green initiation.

### 3. RESEARCH METHODOLOGY

This qualitative study used in-depth semi-structured interviews to gain a deeper understanding of the participants' views on the environmental protection programmes initiated by the luxury hotel in Macao. The research is a case study of a luxury resort hotel in Macao and all the data were collected from the same resort. The luxury resort hotel was worth investigating due to its standing in Macao and its origin. According to the Gaming Inspection and Coordination Bureau of Macao, in 2002, the Macao government granted the bidding and concession for the operation of casino games of fortune to three enterprises, among which, the luxury resort hotel where the study was situated, was one of them. Those three were the first three enterprises to receive casino operating licenses in Macao. Besides, the luxury hotel was a 5-star international chain hotel in Macao and was a representative of other similar hotels in Macao. The researcher believed that being an internationally popular chain, the luxury hotel had an international vision in its operations and should have demonstrated in their efforts on CSR and environmental protection which is one of the major concerns of the existing world (WCED, 1987). Previous researchers have also conducted successful case studies that used only one hotel for the research. For example, Bohdanowicz, Zientara, and Novotna (2011) studied the environmental protection programme called "we care!" in Hilton Hotels, and Antony, Antony, and Ghosh (2004) studied the service quality in a UK hotel chain.

The Snowball sampling method, which refers to getting participants from the information provided by the initial participants (Acharya, Prakash, Saxena, & Nigam, 2013), was used in this research to recruit participants. The researcher was able to recruit all the potential participants by the initial participants' social networks (participant J, E, H, R, G), and from their recommendations, additional participants were recruited. Since this study aimed to get the employees' responses related to the environmental protection aspect of the company, the participants were preferred to have been working in the hotel for at least one year. The participating employees were working both at the front of the house and back of the house including at the Front Office, Bell, Door and Valet, Human Resources Department, and Management training programme. A total of fifteen participants were interviewed for this study (Table 1).

**Table 1: Participants' profile**

| <b>Name</b> | <b>Nationality</b> | <b>Gender</b> | <b>Age Range</b> | <b>Position</b> | <b>Years of Experience</b> |
|-------------|--------------------|---------------|------------------|-----------------|----------------------------|
|-------------|--------------------|---------------|------------------|-----------------|----------------------------|

|   |                |        |       |  |                         |
|---|----------------|--------|-------|--|-------------------------|
| J | Malaysia       | Female | 26-30 | Front Office Service Agent   | One and Half            |
| E | Malaysia       | Female | 20-25 | Front Office Service Agent   | One and Half            |
| H | Mainland China | Female | 26-30 | Front Office Service Agent   | Two                     |
| I | Macao SAR      | Female | 20-25 | Front Office Service Agent   | One                     |
| R | Macao SAR      | Male   | 20-25 | Front Office Service Agent   | One                     |
| F | Macao SAR      | Female | 20-25 | Front Office Service Agent   | One                     |
| G | Macao SAR      | Female | 26-30 | Front Office Duty Manager  | Four                    |
| C | Macao SAR      | Male   | 26-30 | Management Trainee   | One Year and Ten Months |
| K | Macao SAR      | Male   | 20-25 | Representative of Learning and Advancement Team in Human Resources | One                     |
| W | Hong Kong SAR  | Female | 20-25 | Clerk of Employee Relations Team in Human Resources                | One                     |
| L | Macao SAR      | Female | 20-25 | Coordinator of C&C team in Human Resources                         | One                     |
| N | Macao SAR      | Female | 20-25 | Clerk of C&B team in Human Resources                               | One                     |
| O | Macao SAR      | Female | 20-25 | Representative of Employee Services Team in Human Resources        | One                     |
| Z | Mainland China | Male   | 20-25 | Bellman in Bell, Door and Valet                                    | Three and Half          |
| M | Macao SAR      | Male   | 20-25 | Supervisor in Bell, Door and Valet                                 | One                     |

The age range of the respondents in this study was between 20 to 30. Most of the respondents were local Macao SAR residents. The others were respectively from Mainland China, Hong Kong SAR, and Malaysia. Regarding the respondents' levels of position, eighty percent of them were entry-level employees; the other twenty percent of them were respectively supervisor in Bell, Door and Valet, duty manager in Front Office and Management Trainee. This proportion could help the researcher to collect data from mostly entry-level employees meanwhile explore the differences of the views between entry-level employees and management level employees. Moreover, sixty percent of the employees had been working in their positions for around one year in the company. Around twenty-seven percent of the employees had been working in their positions for nearly two years. The rest thirteen percent of them had been working for between three to four years in their position in the company.

Content analysis was used in this research to analyse the data. The data with similar meanings would be gathered into a category to perform analysis using a content analysis method which helps to interpret a huge number of words to meaningful categories while avoiding muddle (Hsieh & Shannon, 2005). Because a huge amount of verbal data was transcribed verbatim and converted into text data in this qualitative research, the content analysis was a suitable method for data analysis in this research. The findings of the content analysis are examined in the next section.

#### **4. DATA FINDINGS AND DISCUSSIONS**

The employees of the luxury resort hotel in Macau perceived that although the hotel had initiated several environmental protection programmes, they were not sufficient. This section examines these issues that were derived from the analysis of the interview data.

##### **4.1 The environmental protection programmes initiated by the luxury resort hotel in**

###### **Macau**

All of the participants in this study were aware of the importance of environmental protection. Additionally, participants even exhibited their knowledge by reporting several reasons why

environmental protection was necessary, including how it may cause natural disasters, the importance of protecting greenery, and benefits to future generations among others. Additionally, most of the participants of this study agreed that the luxury resort hotel in Macau, where they worked, cared about, and exerted effort on environmental protection. The participants reported several programmes initiated by the luxury hotel to protect the environment.

One of the main ways that the luxury hotel aimed to protect the environment was either by recycling and reprocessing resources, or reusing and reducing their uses. The hotel also chose to purchase products that were produced using eco-friendly materials. Participant O provided an example of how the hotel aimed at reducing food waste using a technology, "The company has a food waste processor. This processor converts the food waste into plant food." Recycling newspapers was another major effort initiated by the luxury hotel in Macau. Participant Z clarified,

*In our department [Bell, Door, and Valet], we always put the old newspaper into a recycle box. The employees from another department, the 'Public Area' collect and recycle them. This is a daily routine.*

The participants mentioned that the reuse of paper and other materials was a common practice across departments in the luxury hotel. Participant E, who was a service agent in the Front Office, said, "There is a box particularly for placing paper which can be reused. We reuse the paper if the paper has not been used on both sides. We reuse it when we are printing something not very official". Participant O, who was a representative in the Employee Services team provided another example of how the hotel reused staff uniforms,

*In the past, we provided a set of new uniforms for each colleague in every event. Now, we look at the record and see if the employees had joined the same event last time or not. If they have joined before, they may already have the uniform, so we do not provide a new uniform to them, again. It has saved so many sets of uniforms.*

To protect the environment, the luxury resort hotel had initiated several efforts to reduce the uses of resources, particularly those that are used for internal purposes. Participant O clarified, "The water used in the performance lake is cycled. It will not flow in new water until the quality of the water is too bad.". Participant O provided another example of how the hotel aimed at reducing waste of water during events by saying,

*In the past, we provided bottled water to employees during events such as the Community Chest Walk. A lot of water would be wasted as not everyone needed a whole bottle of water, and most of them liked to throw the unfinished bottle of water away at the end of the events. However, starting from last year, we have provided barrelled water for the employees and have been encouraging them to bring their own water bottle to get water from the barrel.*

The luxury hotel had installed several relevant technological equipment that help to reduce resources and protect the environment. Participant L provided an example of how the installed faucets in bathrooms helped to reduce wastewater,

*The faucets that are installed in bathrooms have an automatic sensor. It can prevent water waste as it automatically stops throwing water when the sensor does not sense hands. Furthermore, the shower faucet has numerous water columns that throw a small amount of water. It saves water compared to the traditional faucets which usually throw big columns of water.*

Some participants also reported that the hotel would like to purchase products that were produced using eco-friendly materials. Participant I provided an example by saying, "I have

noticed that the towel paper in the washrooms is different from the common one [white colour]. It is a little bit yellow, so, I think it is made out of recycled materials”.

#### **4.2 Employee engagement in environmental protection programmes**

A number of participating employees of this study perceived that although the resort hotel had initiated some efforts in enhancing employees' awareness about environmental protection, they were insufficient. The participating employees reported that the luxury resort hotel had been trying to increase awareness about environmental protection through encouragements, promotions, and organization of green events and activities. One of the key programmes aimed at increasing environmental protections awareness among employees was organizing and participating in green events and activities, both within the hotel and outside. Participant C reported, “The hotel always organizes green events that are aimed at sharing green messages such as hiking. I know that many employees participate in the hiking event every time it is held.” Participant O provided an example of the hotel's participation in the green event,

*The hotel participates in green events initiated by the government. For example, the recycling programmes initiated by the Macao government in every Chinese New Year and Mid-Autumn Festival for recycling the useless red pocket envelopes and moon cake boxes are also held in the company at that time. It gives employees a channel to recycle resources.*

The hotel also had a practice of rewarding employees who behaved environmentally friendly periodically. Participant L said,

*Employees Services team organizes an event. It is about emptying your dish. The event is held in the canteen and if an employee finishes all the things on his/her plate, he/ she gets recorded. After the employee has been recorded three times, the employee can join a lucky draw to win a prize.*

The participants also reported that there was a green representative in each department who shares green information in the department. The hotel had also been making use of technology to increase the environmental protection consciousness among employees visually. Participant G clarified:

*In the back office, where employees pass and walk around, we have a television screen where short videos on environmental protection are continuously played. In addition, there are posters all around the back office that carry messages about saving energy and water to turn off the air-conditioners.*

Despite the above efforts, the participating employees felt that they were not sufficient enough to create awareness among employees for environmental protection. One of the weaknesses that the participating employees pointed out was that the hotel was not trying hard to promote its environmental initiatives among its employees. Participant I clarified,



*There are thousands of employees working in this hotel in all-round shifts. They work in different departments and places. Not every place has the signages or television screens. Even at those places where there are, people don't pay attention to them. You need to stop and read what is written in the signages and posters or stop and watch the short video full to understand what they really want to say. Not many employees bother to do that.*

Some participants also reported that because of the lack of promotion of activities, many employees are not aware of the environmental promotion programmes. Participant E remarked,

*I cannot clearly say what the overall performance of this hotel is in terms of environmental protection. My friends sometimes tell me what our hotel is doing, otherwise, I have no idea where and what the company actually does [for environmental protection]. They need to promote to all of us.*

Participant M view summarizes a general opinion of the participants in relations to environmental protection programmes initiated by the luxury resort hotel in Macao,

*I think that the hotel cares about environmental protection. It has done something to reduce waste in different aspects such as water, energy, paper, and food. Besides, the company has already stopped sending paper letters such as payroll to employees' physical addresses. I think that it has put some effort into environmental protection but I think the major challenge is that it has not been as successful as it should be. The key reason, I think is because of the lack of promotion of its programmes which failed to increase the level of awareness among its employees.*

## **5. DISCUSSION**

This paper aimed at examining the luxury resort hotel employees' perception on the environmental protection initiatives by the hotel in Macao. As the findings of this study shows, the luxury resort hotel in Macao had initiated environmental protection programmes through recycling, reusing resources, and reducing the uses of resources. Recycling full used paper and reusing utilizable paper was common in many departments in the luxury hotel. Also, food

waste in the luxury hotel was recycled as plant food to maximize the utility of the resources and reduce waste. In an earlier study by Wan, Chan, and Huang (2017), the scholars had noticed that recycling of wasted food was not included as a part of their environmental protection programme. On the contrary, the finding of this study shows that the luxury hotel had been recycling the wasted food as one of their important programmes for the protection of the environment.

Although it was observed that the luxury hotel was committed to the protection of the environment by creating awareness among employees by strengthening their motivation through various measures, they seemed to be inadequate. For example, as reported by the employees, the luxury hotel had a green team that ensured the continuation of green activities in the organization through the organization of green events and activities. However, such efforts needed greater promotion to be effective. More back-of-the-office promotions and the hotel-wide wider promotional campaigns were needed to make those programmes successful. It was, indeed, commendable that the luxury hotel also organized and joined green events within and outside of hotels where its employees participated. However, since those efforts of creating environmental awareness were not obvious enough for many employees, their effectiveness was questionable. It can be, therefore, suggested, that environmental protection training that includes environmental policies and guidelines for employees can help to increase the awareness of employees and make those programmes effective.

Furthermore, employees' senses of environmental protection and their proactive initiations can immensely help a hotel's endeavours of developing a strong green climate (Chou, 2014). If employees' personal environmental senses are weak, the hotel's green climate development policies may not be effective in nurturing a similar culture. Therefore, it is also essential that hotels' training programmes should focus not only on developing awareness among employees but also highlighting the consequences of not protecting the environment.

## **6. CONCLUSION**

This paper examined the luxury hotel employees' perception of the environmental protection initiatives by the hotel in Macao. Wan, Chan, and Huang (2017) investigated the

environmental awareness, initiatives, and performance in the hotel industry of Macao and found that hotel managers in Macao have high environmental awareness, and most hotels in Macao have adopted green practices and highlighted the drivers and obstacles to go green. However, they failed to examine employees' perspectives on the environmental protection programmes initiated by the hotel. Several studies that investigated issues about Macao are related to tourism and gambling (Wan, 2012; Gu, 2004; Wu & Chen, 2015; Chan, Wan & Kuok, 2014). Some of these studies have investigated the environmental impacts of the Macao gambling industry, and their results showed that the establishment of the casino has created more travel spots and infrastructure in the city, which is the positive impacts; however, serious traffic congestion and air pollution have caused because of the increased use of casino shuttle buses. Their findings have also exhibited some negative environmental impacts caused by casinos in Macao. However, the environmental protection programmes initiated by hotels and their employees' reactions to those programmes have been largely neglected. This study has filled the above gaps by examining these issues.

The findings of this study have several implications. First, they can be used as references for future research about the hospitality industry, environmental protection, hospitality employees' green awareness, and related behaviours. Second, the hoteliers obtain the ideas on the effectiveness of their programme from their employees' perspective and initiate efforts to perfect their environmental protection practices. Third, the findings of this study also provide reflections to the Macao government on how environmental protection programmes that are being initiated by the economic generators (luxury resort hotels) are practiced, and what employees feel about them. This will provide an opportunity for the Macao government to reflect on their own policies that aim to protect the environment of the city. As Macao is building itself as a world tourism and leisure centre to cooperate with the country's belt and road initiative (Macao Government Tourism Office, 2017), hotels' development in Macao is expected to be significant. In addition, environmental protection is a global issue and is becoming more and more important (WCED, 1987), consequently, initiating green practices in hotels is not only important for protecting the environment but also to demonstrate the hotel's contribution to CSR to the society and improve the reputation of both the hotel and the city. Therefore, paying attention to hotels' environmental protection initiatives is needed for both hoteliers and the Macao government.

Due to the insufficient empirical research on environmental protection programmes in hotels in Macao in terms of employee perspectives, a qualitative research method was chosen for an in-depth understanding of this aspect. Consequently, generalizable results were not obtained from this study because of the small sample size. Furthermore, a smaller number of participants may have caused subjective opinions or bias in this study. Since this research is a case study of a luxury resort hotel in Macao, it is possible that the findings of this study may not have provided a holistic understanding of environmental protection programmes initiated by the hotel industry in Macao. Therefore, future studies can delve into these issues and resolve these limitations by conducting cross-sectional studies incorporating larger sample sizes.

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***Conflict of interest***

The authors claim having no conflict of interest in the research work.

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