

# ECO-FRIENDLY PRACTICES IN LODGING ESTABLISHMENTS: a study on the environmental perception and profiles of hotel managers in Santa Vitória do Palmar (Brazil)

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## **ABSTRACT**

This study aims to analyze the perception of eco-friendly practices in environmental management and the natural resources economy, among the managers of the lodging sector in the Santa Vitória do Palmar city (Rio Grande do Sul state, Brazil). This is a qualitative/quantitative study with exploratory, representative, and participative approaches. Data were collected from November 2016 to March 2017 in hotel and extra-hotel establishments in Santa Vitória do Palmar – seat of the municipality - and three of its seaside resort towns. The main result to be highlighted is the lack of environmental management planning in those enterprises. This study is justified on the grounds that no similar research was found.

**Keywords:** Eco-friendly practices, hotel and extra-hotel establishments, Santa Vitória do Palmar.

## INTRODUCTION

Environmental issues have been widely discussed in today's world. Society (whether corporate entities or individuals) has been turning its attention to environmental management and the consequent quality of life that is only possible if everyone prioritizes quality management in natural resources, which are so scarce nowadays. Barbieri (2007) defines environmental management as guidelines and administrative/operational activities that are performed in order to mitigate, eliminate or even avoid environmental damage caused by human action.

Quality and sustainability have been mandatory in the hospitality business for quite some time. The hotel industry infrastructure consumes considerable energy and natural resources in the tourism system. The tourism system discussed here is that proposed by Beni (2007), i.e. an open-system category that influences and is influenced by other systems with which it is associated.

Regarding hotel service providers of the majority of international chains, and even independent national hotels, our reading indicates that they have been incorporating environmental management into their business routines for some time now. On the other hand, small family businesses, which often focus their planning on short-term profit, often end up neglecting environmental issues.

This work originated from a field research developed by a project called "Solid waste and energy consumption awareness in the hotel industry: pilot project for the Lodging Laboratory of the Bachelor Degree Course in Hospitality - Santa Vitória do Palmar Campus". The study analyzed the perception of eco-friendly practices in environmental management and natural resources economy among managers of local hotel and extra-hotel establishments. Hotel industry companies from the Santa Vitória do Palmar, seat of the municipality, and three of its seaside resorts towns were mapped out. The study is justified on the grounds that no similar research was found.

## LITERATURE REVIEW

Even though tourism has been long considered a clean, non-polluting economic activity, Dias (2008) stresses that it is necessary to associate tourism development with planning. The public sector must avoid the licensing and setting up of enterprises in illegal areas, especially when it comes to tourist exploitation of the coast. Moreover, it should also provide basic sanitation services, thus avoiding contamination.

The World Travel & Tourism Council - WTTC (s. d.) (an organization that gathers the world's largest tourism companies, among hotel chains, airline companies, and travel agencies) states that tourism is considerably affected by social and environmental issues that can influence the global demand and the profitability of the industry. The sector continues to grow rapidly and according to surveys, has an estimated growth of 4% for the next decade, with 1.8 billion international arrivals forecast by 2030. This forecast leads us to question how an inclusive, sustainable expansion may be possible. Within this context, the World Tourism Organization - WTO (2004) explains that:

[...] sustainable development in tourism is an ongoing process that requires constant monitoring of the impacts the activity may cause in order to minimize negative impacts and maximize potential benefits through prevention and correction measures. This process requires the participation and commitment of all actors involved, particularly the public authorities, which must encourage and support the process, stimulating the participation of society through consensus-building. Therefore, sustainable tourist products can be developed in line with the local environment and cultures, in a way that turns these into permanent beneficiaries, and not only mere spectators of the whole process (WTO, 2004).

According to Araujo (2010), tourist activities in developing countries, such as Brazil, evolve very rapidly, causing substantial changes in destinations. Following this affirmation, the author emphasizes that for this development to occur, environmental management planning is essential and should not be limited to local environmental management alone, but also to biophysical/ecological features of the location, thus spreading to other dimensions, either directly or indirectly.

Regarding environmental issues, Hoffman and Vieira (2010) consider that this concern only came to be a part of the management process in the 1990s, yet only in new buildings, with the objective of saving water and energy and recycling a few products. The authors state that environmental legislation (which covered everything from the creation of environmental policies to the ongoing review of systems and practices) was created until the end of the 20th century. Enterprises in the hotel industry had to obey these laws in order to reach a certain level of sustainability.

In the national context, companies have been showing some caution when it comes to environmental practices, possibly due to social pressure and legal custody of the environment. The Brazilian Constitution of 1988 (Brasil, 2017) addresses this theme in many titles and chapters, notably in section 255, which describes the national environmental rights guideline. According to this section, custody of the environment is attributed to the public power; however, the population (both the people and companies) must protect the environment as applicable. Barbieri (2007) expresses that this legal mechanism was inspired by the "Nosso futuro comum" report, published in 1987 – i.e. before the Constitution of 1988, which led to the national constitution being called "socio-environmental".

From a market point of view, the development of business measures has also been conducted by the national legislation, especially law no. 6,938/1981 (which established the National Environmental Policy, a legal milestone for all public environmental policies to be developed by federal bodies) and law no. 12,305/2010 (which instituted the National Policy on Solid Waste for all productive sectors). The latter made society think differently about "garbage", and change its relationship with it: what was once discarded is now seen as an economic asset.

As to enterprises of the hospitality industry, it is important that hotels be aware and follow the National Policy for Solid Waste. As stated by the National Plan for Solid Waste, released in 2012 by the Institute of Applied Economic Research, the policy goals propose the

following: proper disposal of solid waste through the reduction of waste generation; the expansion of recycling in association with waste sorting mechanisms, and the social inclusion of waste pickers; assigning responsibility to the entire production/consumption chain for waste destination with the implantation of reverse logistics devices - reverse flow of products, such as recycling and reuse, in accordance with IPEA (2002).

When it comes to environmental issues and the use of natural resources in hotel and extra-hotel establishments, authors in this area agree that this activity consumes resources excessively and contributes significantly to their depletion.

Romério (2010) writes about the decrease in energy consumption and the need to analyze the viability of implementing active technologies such as: adequate light bulbs both indoors and outdoors; motion detectors; monitoring elevators and machines alike; and automation for turning off circuits. As to power supply, the author recommends solar thermal collectors for water heating as well as solar panels and small-sized wind turbines for generating electricity.

With regards to the concept of sustainability, Gazoni (2005) points out that, although there are several definitions for sustainability and that many of them are directly related to the environment and ecology, we ought to come up with an innovative approach, one that represents sustainability in a systemic view, considering nature and its relationships. Thus, the main branches of sustainable development, economic growth, social equality, and ecological balance would all be taken into account.

When we understand lodging as essential facilities for tourism development in a given destination, it is safe to say that eco-friendly measures and practices are still not as widespread as they should be. Among the eco-friendly measures that can be seen in lodging, we can highlight the creation of how-to books about best water, energy, and waste management practices the reduce use of polluting products, or how to contribute to community development, and best consumption practices, according to Gazoni (2005).

Also on sustainable development in lodging facilities, Lunkes and Rosa (2012) stress that when lodging facilities develop their activities and provide services, resources are ultimately depleted. However, due to social pressure, lodging facilities started to develop measures that could meet their guests' demands through more efficient consumption systems. Thus, energy and water consumption are reduced. The authors also state that a hotel's environmental management should be composed of a set of operational and management measures (policies, programs, and practices) aimed at improving performance and causing less environmental impact.

It was in light of all the above concepts, measures, guidelines, and laws that we carried out this study in the city of Santa Vitória do Palmar. Our goal was to analyze the practices of hotel and extra-hotel establishments in relation to eco-friendly practices.

## METHOD

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We employed two different methods to carry out this study. Firstly, we carried out a literature review, which, according to Dencker (1998), has the purpose of elaborating concepts and theoretical milestones. This step, which occurred from October 2016 to April 2017 (i.e. during the research itself) helped us understand the theme more clearly.

This is a qualitative/quantitative research with exploratory, representative, and participative approach. Data was collected through structured questions that varied from open-ended to closed-ended, also based on Dencker (1998).

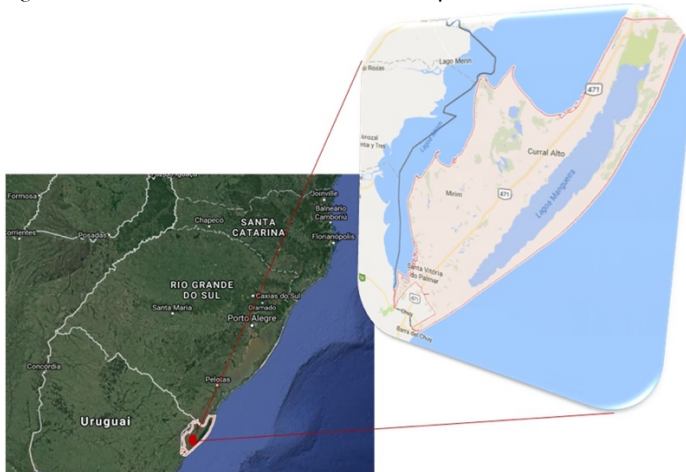
In order to identify lodging facilities and their locations, we conducted online and in loco searches, especially in seaside resort towns, since some of the enterprises did not offer any information online. This step took place in October 2016, and the data collection took place from November 2016 to March 2017, according to the availability of managers.

To decide on which locations to study (in this case, seaside resort towns), we used the judgment sampling method. Schlüter (2003) explains that in this method, researchers purposely select what they feel may be relevant to their studies.

## PROFILING THE OBJECT OF STUDY

The city of Santa Vitória do Palmar is in the southernmost region of the Rio Grande do Sul state (Brazil), 500 km from Porto Alegre (the state capital) and 349 km away from Montevideo (capital of Uruguay), as shown in Figure 1. The city is located on a transit route for foreign tourists, particularly those coming from Uruguay and Argentina, who enter Brazil through the land border in the city of Chuí. Brazilians from Rio Grande do Sul and other states also transit through that area when visiting countries in the southernmost part of South America.

Figure 1 - Location of Santa Vitória do Palmar city.



Source: Google Maps (2017), adapted by the authors.

Santa Vitória do Palmar is 5,243,577 km<sup>2</sup> in diameter and has an estimated population of 31,352 inhabitants, according to the Brazilian Institute for Geography and Statistics (IBGE, 2017). Also according to the IBGE (2017), the city's main economic activities are agriculture and animal husbandry. Since 2015, the city has been the site of the largest wind farms<sup>1</sup> in Latin America, which boosted the economy during its construction and started

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<sup>1</sup> The Campos Neutrais Complex comprises the following wind farms:  
- Hermenegildo Park: 181MW, 101 wind turbines, serves up to 1 million inhabitants, 2.5 thousand hectares;  
- Chuí Park: 133MW, 72 wind turbines, serves up to 800 thousand inhabitants, 3.2 thousand hectares;  
- Geribatu Park: 258MW, 129 wind turbines, serves up to 1.5 million inhabitants, 4.7 thousand hectares.

generating profits in year 2017. An increase of 30% in State VAT is predicted, according to the Brazilian Ministry of Planning (BRASIL, 2017).

We researched establishments in Santa Vitória do Palmar, Barra do Chuí beach, Balneário Alvorada, and Hermenegildo beach. Hermenegildo beach is the closest seaside resort town to the municipal seat (about 23 km away), while Barra do Chuí and Balneário Alvorada are both 33 km away the municipal seat. para o município, a partir, do ano de 2017, sendo previsto um aumento de 30% na arrecadação de ICMS, conforme notícias do site do Ministério do Planejamento (BRASIL, 2017).

The enterprises consisted of the following: five hotels in the municipal seat; two hotels and two inns with cabins for rent at Barra do Chuí; one apartment hotel and one apartment inn at Balneário Alvorada; and four inns, including an establishment with cabins for rent, at Hermenegildo beach - as classified by Beni (2000).

To protect the identities of the companies, they will hereafter be referred to as SVP1, SVP2, SVP3, SVP4, and SVP5 (for those in Santa Vitória do Palmar); BC1, BC2, BC3, and BC4 (Barra do Chuí); A1 and A2 (Balneário Alvorada); H1, H2, H3, and H4 (Hermenegildo beach).

As to the size of the companies, they can all be considered small, as none of them exceeds 26 residential units - RUs, and they are only able to offer from 60 and 80 beds. The enterprises are all family-run and independent.

#### **Establishments in Santa Vitória do Palmar**

Establishment SVP1: classified as a hotel, it is located in the city's central area, roughly three blocks from the local bus terminal. It is a family business that has been active for over 20 years. The enterprise has 20 RUs and 45-50 beds.

Establishment SVP2: classified as a hotel, it is located in the city's central area, roughly three blocks from the local bus terminal. It has been trading for over fifteen years and



underwent administrative changes two years ago, but it is still considered a family business. The enterprise has 20 RUs and approximately 56 beds.

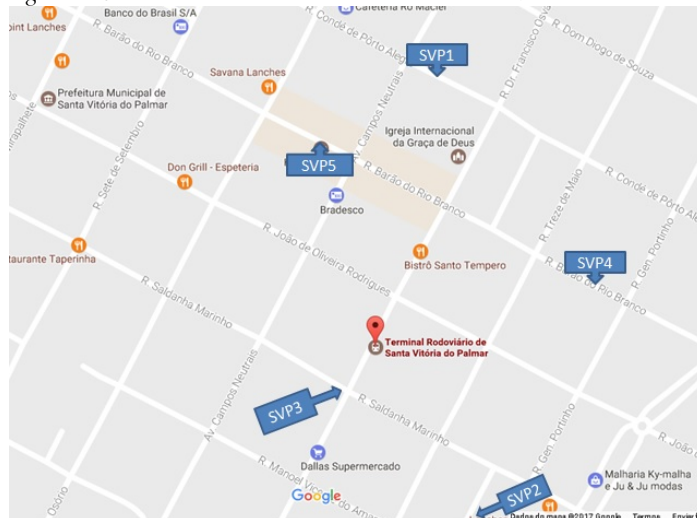
Establishment SVP3: classified as a hotel, it is located in the city's central area, half a block away from the local bus terminal. It has been active for over 45 years and, when compared to the other enterprises, it is the only one in the municipal seat that has its own restaurant, offering lunch and dinner services. The enterprise has 15 RUs and approximately 40 beds.

Establishment SVP4: classified as a hotel, it is located in the city's central area, roughly four blocks from the local bus terminal. It has been active for over 30 years and includes an outsourced restaurant offering lunch services. The enterprise has 19 RUs and approximately 30 beds.

Establishment SVP5: classified as a hotel, it is located in the city's central area, roughly four blocks from the local bus terminal. It has been active for over 30 years. Its general manager is also part of the family and is also in charge of another enterprise, at Barra do Chuí. Enterprise SVP5 has 26 RUs and 65-70 beds.

The locations of the above enterprises are shown in Figure 2.

Figure 2 - Locations of the hotel establishments in Santa Vitória do Palmar.



Source: Google Maps (2017), adapted by the authors.

### **Establishments at Barra do Chuí beach**

Establishment BC1: classified as a hotel, it is located in the central area of the beach, one block from the main square. The building dates back to the 20th century (from 1910 to 1920) and has undergone extensive renovation work over the years. It is a family enterprise that has 23 RUs and 60 beds, offers an outdoor pool and is overseen by an operations manager who reports to the general manager. The general manager also works at the previously mentioned family business located in the municipal seat.

Establishment BC2: classified as a hotel, it is located in the central area of the beach. The back of the building borders the main square. It also dates back to the beginning of the 20th century and has undergone extensive renovation and restoration work over the years. The enterprise has 19 RUs and, when this study took place, it was family-run and overseen by an operations manager. The business has been sold recently, but is still run by a family.

Establishment BC3: classified as an inn, it is located in the central area of the beach, more specifically, on the Chuí Avenue (the main access to the beach), three blocks from the main square. It has been trading for around twenty years, has eight AUs and 32-40 beds. The enterprise is overseen by an operations manager (who also works in maintenance) and is a family business.

Establishment BC4: classified as an inn, it is located near the interchange to the Barra do Chuí beach, on the access road from Uruguay over the international bridge through RS699 freeway. It has been trading for around thirty years and has 16 cabins and 75-80 beds. The enterprise is family-run and has a janitor who is in charge of the place during low season.

The locations of the above enterprises are shown in Figure 3.

Figure 3 - Locations of hotel and extra-hotel establishments at Barra do Chuí.



Source: Google Maps (2017), adapted by the authors.

### Establishments at Balneário Alvorada

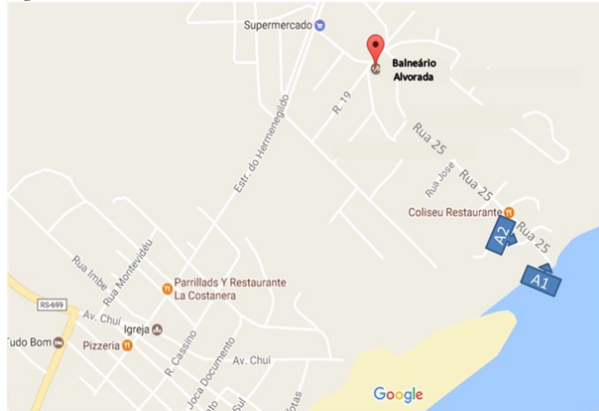
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Establishment A1: classified as an apartment hotel, it is located at the seafront on 25 Street, the main access road to the beach. It has been active for over 20 years. The enterprise counts on 15 apartments and 54 beds, sauna, and two pools - one outdoors and one indoors, which is heated. It is a family business whose administration is shared by the partners throughout the year.

Establishment A2: classified as an inn, it is located half a block away from 25 Street and one block away from the seafront. It has been active for over 20 years. The enterprise counts on 21 apartments in a two-story building, has an outdoor pool, and is also run by a family.

The locations of the above enterprises are shown in Figure 4.

Figure 4 - Locations of hotel and extra-hotel establishments at Balneário Alvorada.



Source: Google maps (2017), adapted by the authors.

### Establishments at Hermenegildo beach

Establishment H1: classified as an inn, it is located half a block from the seafront and also half a block from the pedestrian zone of the Hermenegildo beach. This family business has been trading for over 15 years. The inn, which consists of just one story, has eight apartments and 16 beds.

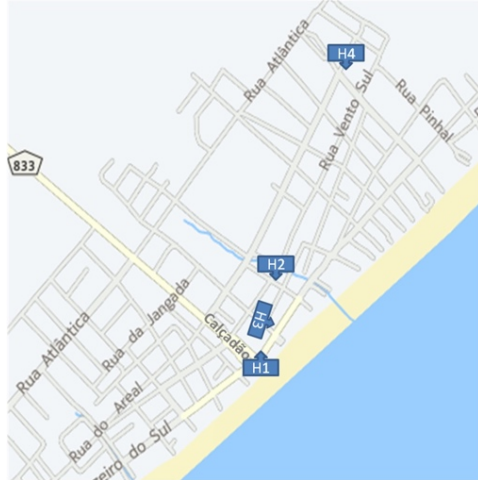
Establishment H2: classified as an inn, it is located two and a half blocks from the seafront and two blocks from the pedestrian zone of the Hermenegildo beach. This family business has been trading for around 10 years. It consists of six apartments and 18-24 beds in a two-story building.

Establishment H3: classified as an inn, it is located one and a half blocks from the pedestrian zone of the Hermenegildo beach, at the seafront. This family business has been trading for over 15 years and has 20 apartments in a two-story building.

Establishment H4: classified as an inn, it is located five blocks from the seafront and nine blocks from the pedestrian zone of the Hermenegildo beach. This family business has been trading for 15 years and has five cabins with 18-22 beds. It also offers a camping site with capacity for 35-40 people.

The locations of the above enterprises are shown in Figure 5.

Figure 5 - Locations of extra-hotel establishments at Hermenegildo beach.



Source: Google Maps (2017), adapted by the authors.

## ANALYSIS AND RESULTS

Firstly, our research identified several hotel and extra-hotel establishments in the municipal seat of Santa Vitória do Palmar and surrounding towns. This was followed by the initial telephone contacts, and then by visits to the lodging facilities and application of the data collection instrument.

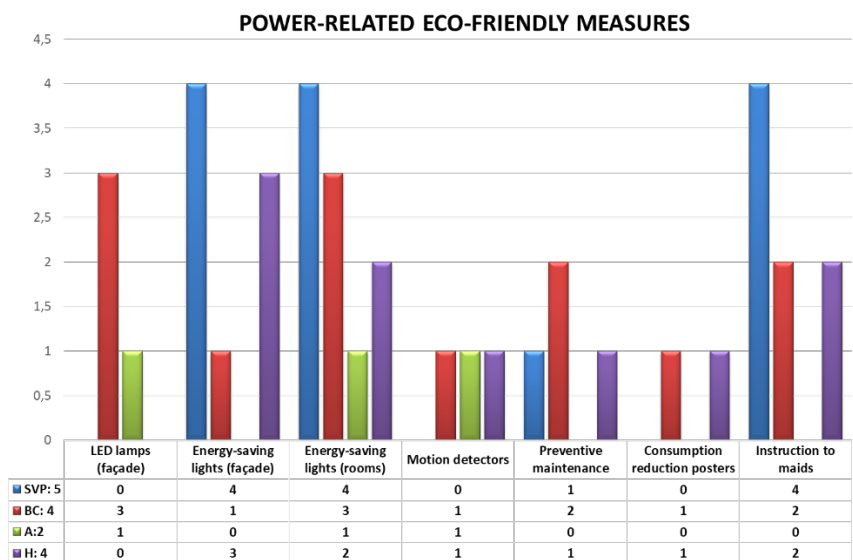
The data collected about sustainable measures or practices adopted by the enterprises will be described in sections, addressing matters related to saving and reducing the consumption of both energy and water, the disposal of waste water and solid/organic waste, the enterprises' concerns to protecting and maintain the biodiversity, difficulties in implementing eco-friendly practices, and finally, an analysis of the managers' profiles.

We consulted fifteen establishments within the scope of this study. Five of them are located in the municipal seat of Santa Vitória do Palmar, which represents more than 90% of the hotel and extra-hotel establishments offered, and ten of them are located in the city's coast, which represents around 70% of the supply. We emphasize that visiting all the establishments was difficult, due to the travel involved, and that a few establishments refused to take part in the research.

As to power consumption, all of the establishments monitor their energy consumption on a monthly basis. Only two of them have an alternate energy source for water heating: A1 has a boiler for heating the indoor pool, while BC3 has a solar heating system for the showers, which is still being tested for future implementation, after cost-benefit assessment.

The graph below shows the eco-friendly measures for reducing energy consumption taken by the enterprises at the four locations studied, and how many enterprises actually adopt them.

Graphic 1 – Eco-friendly measures for reducing energy consumption.



Source: developed by the authors (2017).

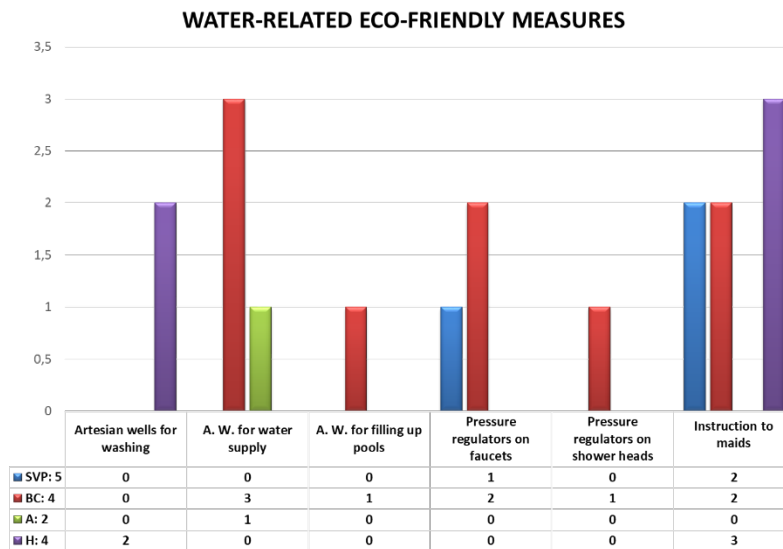
In relation to monitoring water consumption, all of the establishments do so on a monthly basis. Seven of them have an alternate water supply method - in this case, artesian wells. Enterprise BC1 uses water from a well for its swimming pool; H2 and H4 use it for watering plants and washing vehicles and sidewalks; BC2, BC3, BC4, and A2 use it for water supply around the facilities.

In relation to water consumption control, BC3 has pressure regulators installed on its faucets and shower heads. SVP5 has pressure regulators installed only on its faucets,

whereas BC2 and SVP5 avoids excessive use of water for laundry, reusing the laundry water to wash the sidewalks.

In addition to that, SVP2, SVP5, BC1, BC2, H1, H2, and H3 instruct their maids to check for any dripping taps or leakages in the RUs. The graphic below shows the eco-friendly measures for reducing water consumption taken by the enterprises at the four locations at hand and how many enterprises actually adopt them.

Graphic 2 – Eco-friendly measures for reducing water consumption.



Source: developed by the authors (2017).

With regards to waste water, the city does not treat water in any way. It relies only on rainwater pipelines, since there is no domestic sewage, either in the municipal seat nor in any other location researched by us. Therefore, this establishment treats its waste water independently and privately.

Most of the facilities have septic tanks for sewage collection. In fact, some of them (BC4, A2, and H2) even have decantation wells that liberate treated water to rainwater pipelines. In other cases, we simply got no answers to our questioning about sewage treatment, so we moved on to the next question.

Regarding waste sorting, most of the establishments do not separate solid from organic waste, therefore sending all kinds of waste to domestic collection. Seven of the enterprises

practice some type of recycling and dispose of specific material correctly. SVP1, SVP2, H2, and H4 recycle glass, while SVP5 and BC2 send fluorescent tubes and lamps to a collection station located in the municipal seat. When it comes to composting, SVP1, SVP2, BC3, BC4, H1, and H3 use organic matter to fertilize their gardens.

As to the managers, we concluded that only a few of them hold an Administration degree. SVP1, SVP2, A1, and H3 have managers who majored in Administration; BC2 and H1 have managers who majored in Tourism; SVP5, BC1, and H1 have managers who only graduated from High School; and BC3 has a manager who majored in Accounting. The managers of the other enterprises majored in areas that have little do to with Tourism and Hospitality: H2 has a manager with a Nursing degree; SVP4 has a manager with a Civil Engineering degree; and BC4 has a manager with a Dentistry degree.

In relation to environmental concern, eight of the establishments claimed to be deeply concerned about it (SVP1, SVP2, BC1, BC3, H2, H3, H4, and A2). However, only the manager – that of establishment SVP4 - has taken a course in sustainability.

As to the influence that socioenvironmental concepts may have on guests' decisions, nine enterprises believe it is a low-influence factor (SVP1, SVP2, SVP3, SVP4, SVP5, BC4, H1, H2, and H3). In turn, five establishments see it as a medium-influence factor (BC1, BC2, BC3, A1, and H4), while only one of them (A2) thinks it does not influence guests' decisions at all.

With regards to the implementation of recent technologies and eco-friendly practices, two enterprises do not adopt them due to their high cost. Seven of them stated that, besides the high cost, there are no incentive policies. Finally, two others complemented by saying that guests are not interested either.

## FINAL CONSIDERATIONS

Dias (2008) expresses that for sustainable development to occur, the State ought to play a key role in planning not only tourism development, but development as a whole. This study showed that the government of Santa Vitória do Palmar does not provide either



water collection or water services in any location, not even in the municipal seat. However, when it comes to sanitation, it is known that water supply and sewerage are indeed the public sector's responsibility (Brazil, 2007).

Regarding sewage treatment, this should be done from its collection point through to its final disposal. Nevertheless, when cities do not provide this sort of service, enterprises must have septic tanks and leach fields in accordance with the ABNT regulation NBR 7229 (Associação Brasileira de Normas Técnicas - Brazilian Association of Technical Standards). These standards intend to preserve public and environmental health, as well as the safety of guests and employees on areas covered by those systems. Therefore, we suggest that FURG meet with the enterprises' managers to present our results and clarify all legal requirements.

Regarding competition, for those enterprises to stay in the market, they must obey not only the requirements from current legislation, but also from environmental bodies and the guests themselves. With regards to environmental management, Alves, Cavalcanti, and Silva (2006) mention environmental management programs, green stamps, certifications, among others, as strategies that entrepreneurs can make use of.

Regarding our object of study, we verified that entrepreneurs from hotel and extra-hotel establishments do not really know about credit facilities to improve their businesses. One example is Fungetur - Fundo Geral do Turismo (General Trust Fund for Tourism), which promotes resources for developing tourism-related activities through the financing of small and medium-sized companies, as explained by Godoy, Ruffo, and Seadi (2009). Thus, we understand that a public-private partnership between FURG and these enterprises is necessary.

Some of the managers showed lack of knowledge as to the legislation, especially section 20, subsection III, clause bc. The law imposes severe penalty plus the compulsory creation and implementation of a Solid Waste Management Plan not only for the public sector at federal, state or city level, but also for public and private companies. This includes the

lodging industry, which is involved not only because of the hazard its waste represents, but also because of the amount of waste produced.

We stress that even in a scenario where there are not legal penalties, the intense generation of solid and liquid waste justifies waste management for any company that wishes to reduce costs, assure public health and environmental protection, and attract new clients, by offering the competitive advantage of social responsibility, which is so appreciated nowadays. Within this context, we understand that the proper drainage of the waste water generated by a hotel is an urgent necessity (through a sewerage system), as is the correct disposal of solid waste (through recycling and composting). Such measures depend not only on companies, but also on the public authorities.

This study also allowed us to know the managers' profiles and notice that, although most of them hold a degree in Administration or Accounting, they reject the idea of investing in modern technologies that might bring economic benefits and contribute to environmental issues. Despite the managers' complaint of high implementation costs, there are many low-cost measures that could be incorporated by the enterprises, thus reducing expenses and contributing to environmental preservation.

In conclusion, it is safe to say that there is still much work to be done. We detected the need for academics to collaborate with the tertiary sector, especially to help create and implement environmental management plans, procedural handbooks, and standard operating procedures, so that eco-friendly practices can truly take place through these plans.

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