ENVIRONMENTAL MANAGEMENT SYSTEMS AND COMPETITIVENESS: AN ANALYSIS OF MULTIPLE CASES IN ACCOMMODATION ESTABLISHMENTS OF NATAL-RN

SISTEMAS DE GESTÃO AMBIENTAL E COMPETITIVIDADE: UMA ANÁLISE DE MÚLTIPLOS CASOS EM MEIOS DE HOSPEDAGEM DE NATAL – RN

SISTEMAS DE GESTIÓN AMBIENTAL Y COMPETITIVIDAD: UN ANÁLISIS DE MÚLTIPLES CASOS EN MEDIOS DE HOSPEDAJE EN NATAL - RN

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ABSTRACT: The main objective of this article is to investigate whether the application of the Environmental Management System (EMS) contributes to competitiveness among the

accommodation establishments surveyed in this study, to investigate whether there is a correlation between Environmental Management practices and the pricing of these accommodation services; and to see how these environmental practices are disclosed, as a competitive strategy in the market. The research method consists of bibliographic research and semi-structured interviews with the hotel managers of five hotels, all located in the Via Costeira of Natal-RN, which were selected because they implement environmental practices in their enterprises. The research is characterized as an exploratory descriptive study with a qualitative approach to the data obtained. It was found that the environmental management practices of these enterprises are associated with lower operating costs, but there is no direct correlation between these practices and the definition of the prices. Also, the publicizing of these practices are recognized as a competitive strategy in the local market.

KEYWORDS: Environmental Management System (EMS). Accommodation establishments. Competitiveness.

RESUMO: O presente artigo tem como objetivo compreender se a aplicação do Sistema de Gestão Ambiental (SGA) contribui para a competitividade nos meios de hospedagem pesquisados nesse estudo, verificando, a partir desse contexto, a correlação entre as práticas de Gestão Ambiental e a precificação dos serviços de hospedagem; e de qual forma as práticas ambientais são divulgadas como estratégia competitiva no mercado. A metodologia utilizada está baseada na pesquisa bibliográfica, bem como na realização de entrevistas semiestruturadas com os gestores hoteleiros de cinco hotéis previamente selecionados por desenvolverem práticas ambientais em seus empreendimentos, todos localizados na Via Costeira de Natal-RN. A pesquisa caracteriza-se por um estudo descritivo exploratório com uma abordagem qualitativa dos dados obtidos. Verifica-se que o sistema de gestão ambiental nesses empreendimentos está associado à redução dos custos operacionais, que não há uma correlação direta das práticas ambientais com a definição dos preços praticados, e que a divulgação de tais práticas, ainda que reconhecidamente necessária, não é trabalhada como uma estratégia competitiva no mercado local.

PALAVRAS-CHAVE: Sistema de Gestão Ambiental (SGA). Meios de Hospedagem. Competitividade.

RESUMEN: El principal objetivo de este trabajo es comprender si la aplicación de Sistemas de Gestión Ambiental (SGA) contribuyen para la competitividad de los medios de hospedaje estudiados, verificando a partir de este contexto la correlación entre las prácticas de gestión ambiental y los precios en los servicios de hospedaje y si, de esta forma, las prácticas de gestión ambiental son divulgadas como una estrategia competitiva en el mercado. La metodología usada se basa en la investigación bibliográfica y en entrevistas semiestructuradas con los gerentes de cinco hoteles previamente seleccionados por desarrollar prácticas ambientales en sus emprendimientos, todos ubicados en la Via Costeira de Natal – RN. La investigación se caracteriza como un estudio descriptivo exploratorio insertado en el abordaje cualitativo de obtención de datos. El Sistema de gestión ambiental en estos emprendimientos está asociado a la reducción de costos operacionales y no tiene correlación directa entre las prácticas ambientales y la definición de los precios practicados y la diseminación de dichas prácticas, aunque estas sean reconocidas como una estrategia competitiva en el mercado local.

PALABRAS CLAVE: Sistemas de Gestión Ambiental (SGA). Medios de hospedaje. Competitividad.

INTRODUCTION

To meet the expectations of an increasingly informed and demanding clientele, accommodation establishments are continually seeking ways to improve their services, and constantly adapting to satisfy their guests.

It is in this context of adaptations that the environmental discussion is addressed in relation to accommodation establishments, through sustainable practices, recognizing that

hotels also use natural resources, sometimes in a way that is harmful to the environment. Unlike the impacts caused by industries, which occur at the exit of the process, e.g. gases from industrial chimneys, in accommodation establishments, the impacts occur both at the entrance of the process, e.g. unregulated use of water and energy, use of land, and exploitation of the native flora and fauna, and at the end, e.g. pollution from solid waste, liquid effluents, gas emissions, and noise (De Sousa Brito, S.; Torres, H.C., de Araújo, W.A., & Voltolini, J.C., p.160, 2018).

However, environmental practices have recently become a strategy for competitiveness strategy in the hotel industry, and concerns about winning the guest with products of high value and comfort no longer show competitive value when considering sustainability guidelines, giving way to a balance between profit, social responsibility and respect for the environment. (Hsieh, 2010).

A competitive strategy is understood as a set of actions aimed at establishing a competitive advantage in the market (Porter, 1999). This, in turn, is a set of characteristics of a company that allows it to differentiate itself from competitors as it adds value to its products or services and generates profit and progress for the organization. The competitive advantage can be achieved by analyzing the company's internal resources, an approach focused on resources and controlled capacities; or through the analysis of external elements such as consumers and competitors (Lubczyk, 2013).

Within this context, the following reflection is made: does the adoption of an environmental management system (EMS) contribute to the competitiveness of accommodation establishments that adopt environmental practices? From this question, the present work seeks to understand this reality in the accommodation establishments of the Via Costeira, a coastal road in Natal, in the Brazilian state of Rio Grande do Norte; to verify the correlation between the practices of an EMS and the pricing of the accommodation services; to identify whether the environmental practices are publicized as a competitive strategy of the accommodation facilities; and to evaluate whether environmental practices affect the demand for these enterprises.

The topics covered by this work are currently widely discussed, e.g. competitiveness and environmental management, and researched by several authors, such as Hassan (2000), Molina (2003), Gonçalves (2004), Hsieh & Zaro (2011), Bruni & Famá (2012), Moreda (2014), Ahmad (2015), Junior; de Sousa & Demo (2018), De Sousa Brito, S; et al. (2018). It is also important to provide hotel managers and academics with information about the procedures, success factors and difficulties of environmental management in the context of business competitiveness. In this sense, this study aims to gather consistent information to complement the studies in the area of environmental management in accommodation establishments in Natal-RN.

SUSTAINABLE TOURISM AND ENVIRONMENTAL MANAGEMENT IN THE CONTEXT OF ACCOMMODATION ESTABLISHMENTS

In order to understand environmental management in the context of accommodation establishments, it is necessary to outline the historical and conceptual bases in which the theme of sustainability, in the scope of tourism, was developed.

The expansion of tourism activity began in the 1950s with improvements in working conditions, free time, the development of the media and transportation, and emerging technologies, resulting in a greater number of trips. What came to be known as mass tourism, or traditional tourism, started after the Industrial Revolution and intensified after World War II (Barreto, 1996). In relation to this type of tourism, Nascimento and Silva (2009, p.106) point out that:

> (...) fruit of modernity, mass tourism also changes and becomes popular as a human activity of modern leisure; is due to social and economic transformations, which only arise and are concretized in the last century, due to the labor conquests; among other factors that hatch in the big tourist cities, that in moments of leisure more and more people discover opportunities for tourism trips.

However, going beyond the possible beneficial economic effects of mass tourism and recognizing its harmful effects on sociocultural and environmental spheres, new tourism proposals have been launched. Reflections on the interrelations of tourism with the social, cultural and environmental contexts have emerged, being analyzed in a systemic way, as both impact and impacted.

Out of this context, the concept of alternative tourism emerged, which sought to personalize the tourism product based on the valuation of tourists' experiences (Krippendorf, 2000). Thus, a new phase was introduced in tourism: post-industrial tourism. In spite of this moment Molina (2003, p.26) explains that:

> In post-industrialism new requirements are presented to be competitive in intensively contested markets: the differentiation of products / services and also the demassification of markets or high segmentation; the beginning of the personalization of services; the decentralization of decisions in companies and in the sector; and environmentalism, which is unfolding in the strategy of sustainable development.

The strategy of sustainable development, widely discussed throughout society since the 1980s, was reflected in tourism activity, giving rise to the concept of sustainable tourism which is defined as the protection of natural resources, social justice, and economic efficiency (Körössy, 2008).

In the business environment, the environmental discussion was inserted through the proposal of new management models, such as quality management, environmental management, and sustainable management, among others. The focus of this article is environmental management in hosting environments. It is worth noting that environmental management is only one of the dimensions contemplated by sustainability management; it also involves the sociocultural and economic dimensions. In this sense, an Environmental Management System (EMS) is: "part of the management system used to manage environmental aspects, comply with legal requirements and other requirements, and address risks and opportunities." ABNT (2015, p.2).

In the tourism industry, accommodation establishments were pioneers in making the environmental changes necessary. The worldwide hotel sector adhered to an EMS in the early 1980s. In Brazil, these systems began to be adopted from 2000 onwards (Gonçalves, 2004).

The practices of an EMS in accommodation establishments generally cover the areas of energy, solid waste, water, effluents, emissions, environmental education, awareness programs, market aspects (legislation, technologies) and suppliers, and are motivated by cost reduction or legal impositions (De Conto & Zaro, 2011).

Complementing the above, NBR 15401: 2014, a Brazilian standard that presents requirements for the management of sustainability in accommodation establishments, presents the following environmental actions for sustainable tourism: minimizing environmental impacts in all practices of establishment, preparation and response to environmental emergencies (risk and accident prevention), conservation of natural areas, with their flora and fauna, minimizing the impacts of construction and architecture, minimizing the impacts in landscaping planning and operations, solid waste management, effluents and emissions, energy efficiency, and water conservation and management (ABNT, 2014).

Environmental management in accommodation establishments, as an alternative business management proposal, draws on three elements: innovation, performance and quality, considered by Beni (1997) as important elements for the future of tourism. Thus, environmental management is a significant factor of competitiveness.

For Moreda (2014), environmental practices are associated with the technological innovations that have taken place in accommodation establishments. Jäniceke (2010) affirms that the management of innovation is playing an increasingly important role in eco-efficiency, which has become one of the dimensions of competence in enterprises, and a factor of competitive advantage.

For Porter and Van Der Linde (1995), a company can actually increase its competitiveness in the market by adopting environmental practices and complying with environmental regulations, since it is encouraged to develop innovations on a continuous basis, whether in its technical capacity, production processes, reutilization, or economizing on the materials used. The authors state, however, that many companies are not prepared to carry out innovation strategies that produce considerable environmental compensation. They suggest that to start this process, companies should improve the methods used to measure and evaluate the environmental costs and benefits, and to plan innovation-based solutions that will promote both environmental benefits and competitiveness for the company.

COMPETITIVENESS, MARKETING AND PRICING IN ACCOMMODATION ESTABLISHMENTS

Faced with a market with frequent innovations and fierce competition, accommodation establishments are constantly seeking to invest in marketing, in order to strengthen themselves or establish their brand with their target audience.

Tourism marketing in the hotel industry is understood as actions that aim to meet the needs of tourists, anticipating their desires and seeking to foster constant and loyal exchange (Pezzino, 2011).

In this context, customer satisfaction can be seen as the *raison d'être* of any business, and is directly related to the consumers' experiences. Thus, investing in meeting tourists'

desires can bring competitive advantage, through a better understanding of this tourist consumption, since due to its intangible nature, "the consumer cannot experience tourism products and services before consuming them" (Brazil, 2007 , 18), in other words, they cannot be enjoyed before their actual use (Chen & Mathews, 2014).

Although a good knowledge of tourists' experiences as a factor of competitive advantage is a relatively recent theme, the personal experiences of tourists has been an area of study since the 1960s (Uriely, 2005). Also, it should be noted that there is no single form or type of tourism experience, given the multiplicity of personalities and preferences of clients (Cohen, 1988).

The variables of the marketing compound - the so-called marketing mix – were reported by McCarthy (1960), who presented four major groups of activities by which it is structured: product, price, communication and distribution (Júnior, de Sousa & Demo 2018).

For Hassan (2000), regardless of the model of competitive strategy adopted, the main tourism destinations around the world are diversifying their tourism markets, seeking to attract consumers who are increasingly concerned with protecting the environment. This is reflected in the increase in hotel developments that cater for these new demands. According to Silva (2004, p. 2), "these tourists have greater purchasing power and represent an alternative to mass tourism, which usually imposes more wear and tear on equipment and leaves few results."

Investing in alternative forms of tourism, which is reflected in new management models, such as the environmental one, should be understood as a competitive advantage to be considered in the strategic management plan of hotel developments. This is because, as described by Cardoso et al. (2013, p.12), "... the adoption of environmental practices is an attitude that impacts the image of an organization, since it provides positive associations between consumers and society".

For Day (1999, p.59), "competitive advantage is based on the assets and capacities of the company that guarantee superior competitive positions" and can be characterized from three foci of action: operational excellence, customer responsibility, and superior performance.

In this context of the search for competitive advantage, it is important to make the right decisions when defining the characteristics of the product, its price, and how it will be promoted and distributed, according to Doyle (2005). The author makes the criticism that marketing studies describe the marketing mix without providing a rational framework for marketing management (Leite, 2016).

In this respect, price formation, or pricing, is an important variable to consider, because if not managed properly, it can undermine the competitive advantage of a company, no matter how competitive it may be in other aspects. In the words of Ramos and Cruz (2012): "Hotel companies will have to adjust to new trends, whose competitiveness will require ever more efficient management systems. Correct pricing is critical if company goals are to be met. (...) ".

In accommodation services, pricing may be closely linked to quality perceptions, among other aspects analyzed (Zeithaml; Bitner & Gremler, 2011). Thus, consumers'

willingness to pay for a product or service depends on its perceived value, which is the relationship between the desired aspects and those that are actually provided (Bruni & Famá, 2012).

In the marketing mix, price is linked to the ability to make a profit and attract consumers to purchase the products and services offered by the hotel industry (Ahmad, 2015). Thus, an appropriate marketing positioning strategy considers the variables of promotion, price, place and product (Adi, 2015).

For Diamantopoulos (2005), price has a very strong impact on sales volume, and market share exerts a strong influence on demand. Also price manifests itself more quickly than the other elements of the marketing mix, and its modifications are implemented in a relatively faster way in the market. its modification. According to Carneiro (2006, p.137), "the company can launch three different policies in terms of price and quality perceived by the consumer." These are presented in Table 1:

PRICE POLICIES	QUALITY PERCEIVED	PRICE	OBJECTIVE
PREMIUM	Superior	Superior	To emphasize the image of a superior product
BASED ON COMPETITION	Comparable	Lower	To emphasize a lower-priced image, subject to a price war with the competition.
	Comparable	Comparable	To transfer the competition to the other attributes of the product, avoiding a price war.
	Superior	Comparable	To emphasize the image of superior quality, avoiding a price war
ECONOMY	Inferior	Inferior	To focus on sales in low-income segments in which the price variable as the main decision factor.

Table 1: Different policies in relation to price and perceived quality
Note. Source: Carneiro (2006)

According to Carneiro (2006), Premium, Competition and Economy policies differ in the variables, which are defined as inferior, comparable and superior, contributing according the proposed objectives of these policies.

METHOD

This is a descriptive-exploratory study with a qualitative data approach, in which the hotel market of the city of Natal, in the state of Rio Grande do Norte (RN), is identified and characterized. For this purpose, primary research (ad hoc and desk research) was carried out, based on structured and planned studies, as well as field research (Dencker, 2001).

In this field survey, semi-structured interviews were conducted, following a set script that was validated in a pre-test with the sales manager of a medium-sized (four-star) hotel in Ponta Negra Beach, Natal-RN. According to Flick (2009) during the interviews, the contents of the subjective theory, where the questions are designed and controlled according to the theory and guided by the hypotheses being studied, were chosen for this research instrument.

In the selection of accommodation establishments, two criteria were used: they had to be situated on the Via Costeira in Natal-RN (Avenida Senador Dinarte de Medeiros), they had to be registered with CADASTUR - the Brazilian Registry of Tourism Service Providers of the Ministry of Tourism; and they had to be practicing environmental management, as identified through a survey conducted by Andrade and Câmara (2012). The authors start from a business perspective through the three dimensions of sustainability: environmental, social, and economic. The Corporate Sustainability Grid (GSE) is a model based on business behavior in relation to sustainability, and includes actions and programs that are developed and measured through economic, social and environmental aspects, according to Callado (2010). In this research, also carried out in the Via Costeira in Natal, five of the eight respondent hotels of the study fall within the last quadrant of the GSE (quadrant VIII); they have good economic performance and good social interaction, and are committed to environmental aspects, i.e. they are fully sustainable hotels.

Based on these criteria, the research universe was composed of seven accommodation establishments (of the nine that exist on the Via Costeira). The seven establishments are: Vila do Mar Hotel, Parque da Costeira Hotel, Ocean Palace Beach Resort & Bungalows, Serhs Natal Grand Hotel, Imirá Plaza Hotel, Prodigy Beach Resort Natal and Aram Natal Mar Hotel. Of these seven, five (71%) participated in the interview, the other two (29%) were reluctant to provide information and, therefore, were not considered.

The data were collected in July 2017, and tabulated in order to analyze the results and draw conclusions about the phenomenon under study, based on the Analysis Model presented in Table 4. To analyze the actions of the accommodation establishments, this model was based on the eight environmental requirements of NBR 15401, namely: 1. General; 2. Preparation and Assistance for Environmental Emergencies; 3. Natural Areas, Flora and Fauna; 4. Architecture and Construction Impacts on the Site; 5. Landscaping, 6. Solid Waste, Effluents and Emissions; 7. Energy Efficiency; 8. Conservation and Management of Water Use (ABNT, 2014).

The analysis techniques used followed the logic, proposed by Dencker (2001), that descriptive analysis (overview of the results) is an important part of research, followed by analysis of cross-data (relations between categories of information) and interpretative analysis, which involves reading these data from the perspective of theoretical concepts.

A literature review was conducted, gathering data from graphic and computerized material. The following keywords were used: environmental management; tourism; accommodation establishments; competitiveness and pricing. Bardin's Content Analysis (2010) was used to analyze the results. This is a series of communication analysis techniques was used to obtain a systematic and objective description of the message content, and indicators (quantitative or not) showed information about the conditions of production/reception (inferred variables) of these messages, it being the primary role of the researcher to interpret the data obtained.

ENVIRONMENTAL MANAGEMENT AND COMPETITIVENESS IN ACCOMMODATION ESTABLISHMENTS OF NATAL-RN: RESULTS AND DISCUSSION

In the characterization of the Interviewees and the Hotels, characteristics of the interviewees (Table 2), including their job title at the hotel, age, and academic qualification, provide important data, and these managers' knowledge and concerns in relation to environmental issues.

INTERVIEWEES	JOB TITLE	AGE	EDUCATION TITLE	EDUCATION COURSE
G1	Commercial Manager	36	Incomplete Superior	Accounting
G2	Hosting Manager	44	Full Superior	Managment
G3	Director	48	Full Superior	Management
G4	Account Manager	33	Full Superior	Tourism
G5	Operational Manager	51	Full Superior	Management

Table 2: Characteristics of Interviewees
Note. Source: Survey Data.

The interviewees were hotel managers. From the answers, it was found that they were aged between 33 and 51 years, and had taken bachelor's degree in Business Administration. These managers were chosen for the interviews because the initial contact showed that they had some knowledge of the subject to be addressed. The fact that the interviewees were all managers suggests that the knowledge and management of environmental practices has not filtered down to all the employees in the hotel.

In order to characterize the profile of the hotels included in the survey, technical data were identified, including the year of construction, number of accommodation units (AUs), number of beds, star rating, average daily rate, and occupancy rate. This information is shown in Table 3.

Hotels	Year of Construction	AUs	Beds	Stars	Daily Rate (R$)		Occupancy Rate (%)	
					High	**Low**	**High**	**Low**
1	1986	210	940	4	350	185	90	75
2	1995	315	1115	5	520	260	85	60
3	2005	188	496	5	680	290	78	55
4	2005	396	1208	5	650	433	95	62
5	1990	351	1012	4	390	220	85	60

Table 3: Characteristics of hotel included in the survey
Note. Source: Survey Data.

Identifying the year the hotels were built helps us to understand the political, ideological and social context in which it was built. By the 1990s, for example, environmental awareness was consolidated in companies. According to Gonçalves (2004):

> The term "environmental quality" then became part of everyday life. The companies sought to rationalize the use of water, energy and resources, as well as a greater effort and encouragement to recycle and reuse them.

It is observed that all the hotels included in the survey were built in the 1990s, which the exception of one, which was built of the 1980s. Thus, they were built when the environmental theme was already in vogue. These are large-scale enterprises with between 188 and 396 AUs, daily rates of between R$188 and R$ 680, and occupation rates ranging from 55% to 95%, depending on the season. Two of the establishments were hotels and three were resorts. The other types of accommodation establishments were not identified.

ENVIRONMENTAL MANAGEMENT AND COMPETITIVENESS IN ACCOMMODATION ESTABLISHMENTS: PERCEPTIONS AND ACTIONS OF HOTEL MANAGERS IN NATAL

In order to identify the role of environmental management in the overall management of the hotels surveyed, the managers were asked about the implementation of environmental actions and the motivations for doing so.

According to the managers, the main environmental practices carried out in the accommodation are the use of solar energy as the main energy source, reducing energy consumption through the use of LED lamps, reducing and saving water consumption by inviting guests to reuse towels, and the use of sensors to switch off the water supply when it is not in use. Corroborating the trend in relation to these practices Porter (1999, p.372) states that: "Adequately developed environmental standards are capable of triggering innovations that reduce the total cost of a product or increase its value." Thus, these innovations resolve the impasse and allow companies to use a range of inputs in a productive way.

Other actions were cited, such as: separating solid waste for selective recycling, recycling oil, collection of batteries, and campaigning for the reuse of paper.

The main motivation reported by managers for implementing these environmental practices was initially to reduce costs, particularly on electricity, which is one of the highest fixed costs of the hotel industry, although an environmental awareness among staff and guess has already been noticed. A fact already observed by Lamas (2012, p. 61) in his research is: "The knowledge and concern of managers with the realization of environmental practices in hotels are still incipient, since they are limited to energy and water reduction, denoting, therefore, actions of cost savings and not necessarily actions in favor of the environment ".

The managers were also asked about the involvement of employees and guests in the hotel's environmental actions. The employees with most involvement are those in managerial, maintenance, and reception positions, the latter being responsible for providing guests with information about the hotel's environmental practices.

In regard to customer participation, the guests are invited to reuse bedding and towels, and to be aware of their water consumption. This is done through information notices, strategically placed in the accommodation units (AUs).

Taking into account the levels of awareness in the behavior and decision making of the clients, it is understood that the daily changes can also be verified in the other environments, with individuals more aware of their responsibility as decision makers. (Silva, M., Czykiel, R., Figueiró, P., Santos, W. S.F., & Galvão, U. 2013).

According to Ghotel1, these practices are passed on to customers, making them aware of their consumption. This indirectly affects the daily rate, since a higher profit margin enables the accommodation establishments to launch more special offers, and thereby reduce their rates, making the enterprise more competitive in the market.

Regarding the perceived results of the environmental actions carried out, the managers were asked about changes in guests' demands, in the pricing, and in the image of the enterprise. Ghotel4 revealed that there is no direct relation between the environmental practices and the number of guests, and affirmed that the prices were not influenced by these actions. This respondent also stated that environmental management affects the image of the enterprise, as the guests are increasingly informed and aware of environmental issues.

The managers were asked about the benefits and difficulties of performing environmental management in the hotel business. According to Ghotel1, the biggest difficulties are in the costs initially invested in the environmental practices and training the professionals involved. According to the manager, the executive board does not always have this perception and often, it is seen as a cost with no returns, or only viable for certain hotels with a particular clientele, such as charter hotels, or rural hotels.

The difficulties reported in carrying out environmental practices are directly related to cost and operational issues, since they are understood as high investment actions. According to the manager of Ghotel5, the returns are seen in the medium term, rather than immediately, and the enterprise should bear this in mind when adopting these practices.

In relation to behavioral changes, especially those related to consumption, Silva and Gómez (2010) note that education emerges is an agent of change, encouraging individuals to become more aware of their consumption, and their role as citizens. Environmental education is also a premise for administrators, managers, and entrepreneurs in the accommodation, within this complex and important context of awareness.

Finally, the managers were questioned about whether the environmental practices are disclosed, and how this is done. According to the manager of Ghotel3, the practices adopted are not very well publicized; they are usually carried out at the time of the guest's arrival in the enterprise, through pamphlets and signs placed in the AUs to explain and encourage these practices.

The data obtained are organized and summarized in Table 4, for better analysis.

HOTEL	ENVIRONMENTAL PRACTICES	UH	RATE (HIGH / LOW)	OCCUPANCY (HIGH / LOW)
Ghotel1 4	3. Natural areas, flora and fauna; 4. Architecture and impacts of on-site construction; 5. Landscaping, 7. Energy efficiency, 8. Management of water consumption.	210	R$350.00 / R$185.00	90% / 75%
Ghotel2 5	3. Natural areas, flora and fauna; 4. Architecture and impacts of on-site construction; 5. Landscaping, 6. Solid waste; liquid effluents; 7. Energy efficiency, 8. Management of water consumption.	315	R$ 520.00 / R$ 260.00	85% / 60%
Ghotel3 5	3. Natural areas, flora and fauna; 5. Landscaping, 6. Solid waste; liquid effluents; 7. Energy efficiency, 8. Management of water consumption.	188	R$ 680.00 / R$ 290.00	78% / 55%
Ghotel4 5	3. Natural areas, flora and fauna; 4. Architecture and impacts of on-site construction; 5. Landscaping, 6. Solid waste; liquid effluents; 7. Energy efficiency, 8. Management of water consumption.	396	R$650.00 / R$ 433.00	95% / 62%
Ghotel5 4	3. Natural areas, flora and fauna; 5. Landscaping, 6. Solid waste; liquid effluents; 7. Energy efficiency, 8. Management of water consumption.	351	R$ 390.00 / R$ 220.00	85% / 60%

Table 4: Analysis framework: practices, pricing and demand
Note. Source: Survey Data.

It can be seen from Table 4 that the hotels surveyed perform between five and six of the eight environmental requirements proposed by NBR 15401 (ABNT, 2014). One of the requirements not met by any of the establishments was reducing air emissions (gases and noise). One of the environmental practices most publicized in the establishments was the management of water consumption.

Complementing the analysis in the previous Table, Table 5 shows the environmental practices analyzed in this study according to NBR 15401 (ABNT, 2014), and the frequency with which they were practiced.

ENVIRONMENTAL PRACTICES	FREQUÊNCY %
General (sustainable practices to minimize environmental impacts)	100%
Preparation and Assistance for Environmental Emergencies (risk and accident prevention, emergency preparedness and response).	Not covered in the questionnaire and not commented on by the managers

Natural areas, fauna and flora (conservation of own natural area or supporting the natural area of third parties, protection of flora and fauna)	100%
Architecture and local construction impacts (minimizing impacts during construction, operation, and repair works)	60%
Landscaping (landscape planning and operation minimizing environmental impacts, information and explanation for guests)	100%
Solid wastes, effluents and emissions (measures to minimize impacts from solid waste, liquid effluents and air emissions)	80%
Energy efficiency (plan and implement measures to minimize energy consumption, in particular from non-renewable sources)	100%
Conservation and Management of water use (control and recording of water consumption, consumption objectives, regular inspection)	100%

Table 5: Environmental practices and their Frequency
Note. Source: Survey Data..

Analyzing Table 5, it was concluded that five of the eight specifications were carried out by all the accommodation establishments i.e. a frequency of 100%, making them the most used and recurring practices in the enterprises, besides being the ones most publicized through internal actions and in the media This corroborates the assertion that environmental management in these enterprises is geared more towards cost reduction.

It was also verified that not all the establishments practiced solid waste management. The architecture and the impacts of local construction were mentioned by 60% of the interviewees, and landscaping was applied by all the enterprises surveyed.

In all the establishments, energy efficiency is deemed important, given the use of solar energy throughout the establishment. Water management is also one of the most commonly used practices, through reducing consumption and encouraging the conscious use of drinking water.

CONCLUSION

The objective of this study was to verify whether environmental management contributes to the competitiveness of accommodation establishments, through an analysis of the correlation between environmental practices and pricing.

It was observed that there is no direct relationship between these two factors i.e. that prices are not necessarily influenced by environmental actions. Therefore, the implementation of environmental management practices is mainly related to reducing operating costs, and their adoption still perceived as a high investment by the managers. The awareness of its importance is still quite incipient, and it is not widely publicized within the organizational culture of the establishments surveyed in this study, even though previous research considered them to be sustainable companies.

From another perspective, it is seen that although incipient, there is interest in carrying out environmental actions to meet an increasingly demanding and informed clientele. Thus, the client plays a key role in these changes.

The implementation of environmental practices, as part of an environmental management system, does not necessarily lead to an increase in demand for the establishment.

It is therefore seen that for these enterprises, environmental management is seen more as a legal requirement, as established by the regulatory standards and Brazilian environmental management bodies, than as a strategy for gaining competitive advantage.

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Contribution of each author to this study

Andressa Ferreira Ramalho Leite: Choice of themes; definition of the problem and objective of the article; methodological procedures; analysis of the results and writing the article.

Suellen Alice Lamas: Choice of theme; definition of the problem and objective of the article; methodological procedures; analysis of the results and writing of the article.

Wilker Ricardo de Mendonça Nóbrega: Definition of the problem and objective of the article; indication of bibliographic references; writing and final revision of the article.