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# Environmental management of the tourist accommodation industry and sustainable governance in a protected area<sup>1</sup>

Gestión medioambiental de la industria de  
alojamiento turístico y gobernanza sostenible  
en un área protegida



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## I. INTRODUCTION

Sustainability is a pillar for tourism competitiveness, particularly in destinations whose natural heritage is protected, such as Biosphere Reserves (Saeidi *et al.*, 2015; Wilson *et al.*, 2009). The role of the tourist accommodation providers is critical in this respect. In addition to the direct environmental impact of the volume of business, the close, direct relationship with the customer is a decisive factor in the tourists' experience of the destination. Therefore, in a sustainable governance model, profitability needs to be reconciled with the preservation of the basic support of the business, which is the natural and socio-cultural environment (Bagur-Femenías *et al.*, 2015).

From this perspective, the present study aims to perform an exploratory analysis on the scope of the environmental protection policies of the accommodation sector in a mass tourism destination classified as a protected area (Biosphere Reserve), identifying the reasons which motivate that environmental behaviour (particularly, the relevance of economic and market incentives) and main obstacles faced. Moreover, we aim to assess the extent to which such environmental management is aligned and coordinated with the governance policies of the



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### EXECUTIVE SUMMARY

The environmental management of the hotel industry related to the governance of a mass tourist destination under the particular conditions of the protected area consideration (Biosphere Reserve) is analysed. The empirical study is performed with a sample of 94 tourist accommodation establishments in Fuerteventura (Canary Islands – Spain) and determines the scope of the environmental protection measures, the motivating factors and barriers. Differences between hotel and non-hotel establishments are identified so that a better delimitation of a sustainable governance model based on public-private coordination can be formulated.

### RESUMEN DEL ARTÍCULO

Se analiza la gestión medioambiental de la industria hotelera y su relación con la gobernanza de un destino de masas condicionado por su consideración de área protegida (Reserva de la Biosfera). Para una muestra de 94 establecimientos de Fuerteventura (España) se determina el nivel alcanzado por su protección medioambiental, los factores impulsores y obstaculizadores. También se identifican las diferencias entre oferta hotelera y extra-hotelera, contribuyendo a la delimitación de un modelo de gobernanza turística sostenible basado en la coordinación público-privada.

destination, particularly those derived from its status as a Biosphere Reserve. Finally, we intend to contrast whether, in the aspects analysed, there are significant differences between hotels and non-hotels (tourist apartments).

With these objectives this study aims to contribute to the following gaps delimited in the literature, as well as to respond to knowledge needs in the managerial and institutional scope.

Research developing frameworks to evaluate 'good' protected areas governance is growing, and now the challenge is to measure the effectiveness of that protected area governance (Kisingo *et al.*, 2016). Additionally, interest in social and environmental responsibility

as an approach to tourism governance and management is nevertheless growing (Coles *et al.*, 2013). So, we want to contribute to a developing research topic which needs empirical advances (Erkus – Öztürk & Eraydin, 2010). Likewise, Jamal & Stronza (2009) emphasize the need to explore the scope of collaborations to get the challenge of sustainability in a protected tourist destination, that means, how the tourism system fits with the protected area system.

The inclusion of Fuerteventura in the World Network of Biosphere Reserves in 2009 implies the commitment of local institutions to promote a balanced relationship between conservation and development, favouring the participation of diverse sectors. That justifies the need to analyse the link between firms' environmental management and governance policies in this special protected touristic area.

On the other hand, the majority of studies have focused on the industrial sector, however, there exist significant differences in the nature of environmental management depending on the sector and its level of orientation to the client (Armas-Cruz, 2011). According to Coles *et al.* (2013), additional research in travel and tourism is needed and we aim to contribute in this way.

With respect to motivations to environmental behaviour, prior literature suggests that, in general terms, small and medium sized enterprises (SMEs) does not strategically orientate their environmental management to the achievement of competitive advantages and, in their majority, limit themselves to compliance with legal requirements and those of their principal stakeholders (Brammer *et al.*, 2012). However, Murillo-Luna *et al.* (2008) contrast that firms located in a protected natural space demonstrate a more proactive attitude,

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influenced by a more demanding environmental standard. Thus, we try to contribute with an empirical study applied in a sample of accommodation establishments, mainly small and medium sized, located in a Biosphere Reserve. In the same way, the barriers that limit the environmental performance in that conditions are also analysed.

Finally, another novel contribution of this study is to determine if there are differences due to the characteristics of each type of offer (hotel vs. non-hotel), which constitutes an important gap in previous literature. Font *et al.* (2016) conclude that the level of sustainable proactivity of tourism companies located in protected areas and their motivations are not homogeneous within the tourism sector, although these authors focus their attention on the differences explained by the firm's size. Therefore, this paper raises the objective of evaluate if the type of accommodation implies significant differences in its environmental performance.

The paper starts by analysing conceptually the link between governance and sustainability of the tourism system and, particularly, the relevance of environmental protection for the competitiveness and long-term survival of the hotel sector. Secondly, the empirical study analyses the situation in the hotel and non-hotel sector of Fuerteventura, (Canary Islands – Spain) one of the most important tourist destinations in Spain, included in the World Network of Biosphere Reserves in 2009. Finally, conclusions drawn from the quantitative analysis are presented, as well as the limitations and future lines of research.

## 2. GOVERNANCE, SUSTAINABILITY AND COMPETITIVENESS IN THE HOTEL SECTOR

The tourism system involves multi-conditioned processes that interact in a network with other socioeconomic and environmental systems, determined unequally by the interests of its public and private actors. From this systemic approach, governance is indispensable for the development of tourism and territorial policies as it incorporates the representation of diverse agents by developing relationships of integration and interdependence (Santana, 2009).

Specifically, in sustainable tourism management models, governance significantly improves decision-making helping to preserve natural and cultural values without undermining tourism business competitiveness. So, coordination with the public administration in the exercise of the socio-environmental responsibility of tourism

### KEY WORDS

Tourist governance, environmental management, Biosphere Reserve, hotel and non-hotel tourist accommodation.

### PALABRAS CLAVE

Gobernanza turística; gestión medioambiental; Reserva de la Biosfera; alojamientos hoteleros y extra-hoteleros.

companies contributes to the improvement of the competitiveness of this sector in a globalized environment (Álvarez-González & González-Morales, 2008).

On the other hand, protected areas make novel demands on governance institutions and policy, across the diversity of ownership and responsibility arrangements (Lockwood, 2010). That 'good' governance is essential to the effective delivery of protected area benefits (Kisingo *et al.*, 2016). The quality of that environmental governance policy outputs increases with increasing intensity of local participation and the dialogue to stakeholders, which favors network building (Kochskämper *et al.*, 2016).

In the case of protected tourist areas, Wilson *et al.* (2009) speak of a 'new management paradigm' in which close collaboration is required in the working relationships, where the managers of these protected areas must identify and incorporate the particular interests of each of the agents involved. This perspective provides a heuristic framework for the analysis of the systems to be governed, institutional arrangements and principles and values in use. In this respect, there is little information in the literature addressing these cooperative relationships, especially with tour operators, what the authors call public-private partnerships (PPPs).

Definitely, collaborative and associative forms of governance among tourism companies and other related agents are growing in importance in the drive for sustainable and environmentally sensitive tourism (Erkus – Öztürk & Eraydin, 2010).

This adds a further justification to the interest and relevance of this study applied in a Biosphere Reserve, which implies to test sustainable development methods at the regional level. Thus, 'regulatory' and 'community' stakeholders (Murillo-Luna *et al.*, 2008) favour the greater business involvement in that global commitment to a sustainable development model in this protected touristic areas.

Most references in the literature affirm that minimizing environmental impact and designing products of ecological quality can be powerful differentiation and value creation tools (Armas-Cruz, 2011; Saeidi *et al.*, 2015), as well as a means to achieve greater efficiency in the production ('Eco-efficiency'). From this perspective, hotel companies, facing a dynamic and competitive future, must incorporate the environment into their strategic planning, furthermore, the increasing pressure of stakeholders (legislation, lobbyists, clients, etc.) forces the accommodation sector to adapt to, and even anticipate, these

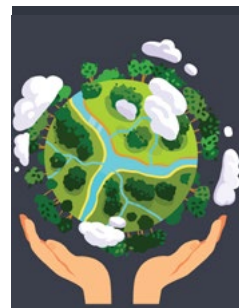


new conditions to guarantee their survival. Thus, arguments about the impact of the environment on business competitiveness point to the desirability of prevention versus control. Proactive strategies are the most appropriate for converting environmental challenges into opportunities that can generate competitive advantages for the hotel (López-Gamero *et al.*, 2011; López-Gamero & Molina-Azorín, 2016). However, the effective implementation of their social and environmental responsibility places important constraints on the companies, such as implementation costs, difficulties in dialogue with the community, motivation of managers and employees and the availability of economic, human and time resources (Huimin & Ryan, 2011; López-Gamero *et al.*, 2011). Besides which, in the particular case of the hotel sector, there is the need for managers to manage and reconcile certain tensions that still remain between the commercial and philanthropic activities of the company. In order to achieve this, it is essential to consider not only the legal and ethical perspectives of the company's socio-environmental responsibility, but also the moral perspective, which will facilitate improvements in medium and long term profitability (García & Armas, 2007; Henderson, 2007).

Environmental performance in the hotel company can influence the two main sources of competitive advantage: cost leadership and product or company differentiation, as well as through the improvement of the quality of the service. Several empirical studies show that, in the environmental protection of hotel establishments, there is a predominance of actions directly related to the reduction of costs (saving energy, water, etc.), since they can mean significant increases in profitability in the short term (Manganari *et al.*, 2016; Molina-Azorín *et al.*, 2015).

As far as the market is concerned, it increasingly values a respectful attitude towards the environment, reflecting the strong social concern for its conservation. This assessment is made either directly by consumers requesting products and services respecting the environment (Bagur-Femenías *et al.*, 2015), or indirectly through different intermediaries (mainly tour operators and travel agencies), environmental groups, shareholders, etc. (Armas-Cruz, 2011; García & Armas, 2007; López-Gamero *et al.*, 2011).

After highlighting business opportunities that the sector is exploring regarding its environmental challenges, a useful contribution would be to analyse how this is being achieved in a mass destination subject to the restrictions applying to the protection of its environment. This



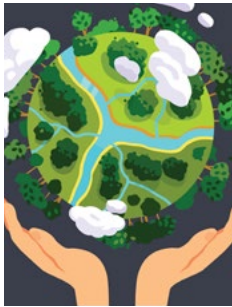


is the previous step to diagnose the coherence of the destination's collaborative governance in terms of sustainability.

With respect to motivations and barriers behind corporate environmental behavior, in relation to protected areas governance, firstly it is necessary to consider the influence of public administration. Lawrence *et al.* (2006) findings indicate that government pressure to establish environmental protection practices is less than would be thought and a greater institutional involvement in the role of stimulator of corporate environmental practices, favouring also the configuration of networks is needed. However, other empirical references obtain that the principal stimulus for the progressive inclusion of environmental preoccupation in the management of SMEs is compliance with legislation, followed by the pressure of stakeholders like supply chain pressure Hofmann *et al.* (2012)

These different results in empirical studies suggests to us that the motivation of environmental commitment, and the pressure perceived in favour of it, are aspects which may depend on the sector of activity and the geographical and institutional ambit in question, which justifies the interest in examining this subject further. From this point of view, the present study evaluates not only regulatory motivations and pressure from stakeholders (suppliers, clients, the administration, etc.), but also economic motives (cost saving), market reasons (differentiation, attracting new market segments, etc.) and ethical commitment of the company itself.

On the other hand, the literature is in broad agreement when identifying the principal barriers faced by SMEs in adopting environmental protection practices. Firstly is the lack of resources and experience and strategic knowledge for the environmental management. To this must be added the perception of the firm of the slight impact which it individually causes, the lack of adequate information about the benefits of environmental management, such as competitive advantages, and the lack of institutional support, of workers, clients and/or suppliers (Brammer *et al.*, 2012; Lawrence *et al.*, 2006). Thus, this study aims to determine the most pressing needs for the strengthening of the environmental implication of the accommodation sector in the context of Biosphere Reserve and as a result, should become a starting point for the definition of public policies and for the strategic and operative re-planning of management.



### 3. THE CASE OF THE ACCOMMODATION SECTOR IN FUERTEVENTURA BIOSPHERE RESERVE

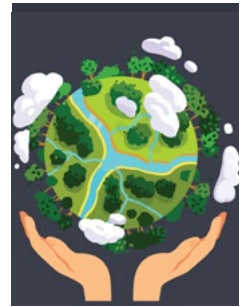
The Canary Islands is one of the most important destinations in Spain, which was ranked third in the world for international tourist arrivals in 2015<sup>3</sup>, and Fuerteventura hosted 15.79% of these 13,301,251 tourists who mainly choose Fuerteventura<sup>4</sup> for its climate and beaches. Therefore, the bond with the physical environment and the landscape of Fuerteventura's tourism offer is particularly close. This offer is made up of 43,981 hotel beds and 17,423 non-hotel beds, with a predominance of high categories (four stars or more) in the hotel sector and lower categories (three stars or less) in the non-hotel sector.

Based on institutional sources, a list of all hotel and non-hotel accommodation in Fuerteventura was drawn up and this was the population under study, with 130 establishments, of which 51.5% are hotels.

The information was collected with a questionnaire sent electronically to the managers and completed in the first quarter of 2015. The resulting sample was 94 establishments (72.3% of the total), classified by type of accommodation (49 hotels and 45 non-hotel), with a confidence level of 95% and a sampling error of +/- 5.34%.

The questionnaire was designed by adapting previous models (Armas-Cruz, 2011; Bos-Brouwers, 2010; Brammer *et al.*, 2012; Oreja-Rodríguez & Armas-Cruz, 2012) to the specificities of this study. It included questions<sup>5</sup> about the environmental management practices applied by tourist accommodation establishments, the reasons for integrating these practices as well as the difficulties faced in their application. The questionnaire also evaluated the interrelationship of the environmental policies of these companies with those developed by the reference institutions in the sustainable governance of the destination.

A Likert scale is used to code the answers, where 1 is the lowest value of the analysed characteristic and 5 is the highest. Cronbach's Alpha coefficient guarantees the internal consistency of the scale ('environmental protection measures': 0.873, 'motivations': 0.921, 'difficulties': 0.843). Statistical analysis of the data was performed with SPSS-19.





### 3.1. Applied environmental management

**Figure 1** shows the mean level of application of these environmental protection activities, distinguishing between hotel and non-hotel and indicating the rank of each of the environmental protection practices 'based on the size of the factor's mean rating relative to the size of the other averages' (Brammer et al., 2012, p. 428).

Compliance with legislation (P3.8) and reduction in the use of hazardous substances and/or pollutants (P3.5) are the activities with the best results. Widening their environmental marketing actions (P3.11) and developing integrated management systems according to reference standards like ISO 14000 or EMAS (P3.2) are the areas where respondents have made the least progress so far.

### 3.2. Motivating factors and barriers

**Figures 2 and 3** show the statistics of the 'motivations' and 'difficulties' for the practice of their socio-environmental responsibility, respectively.

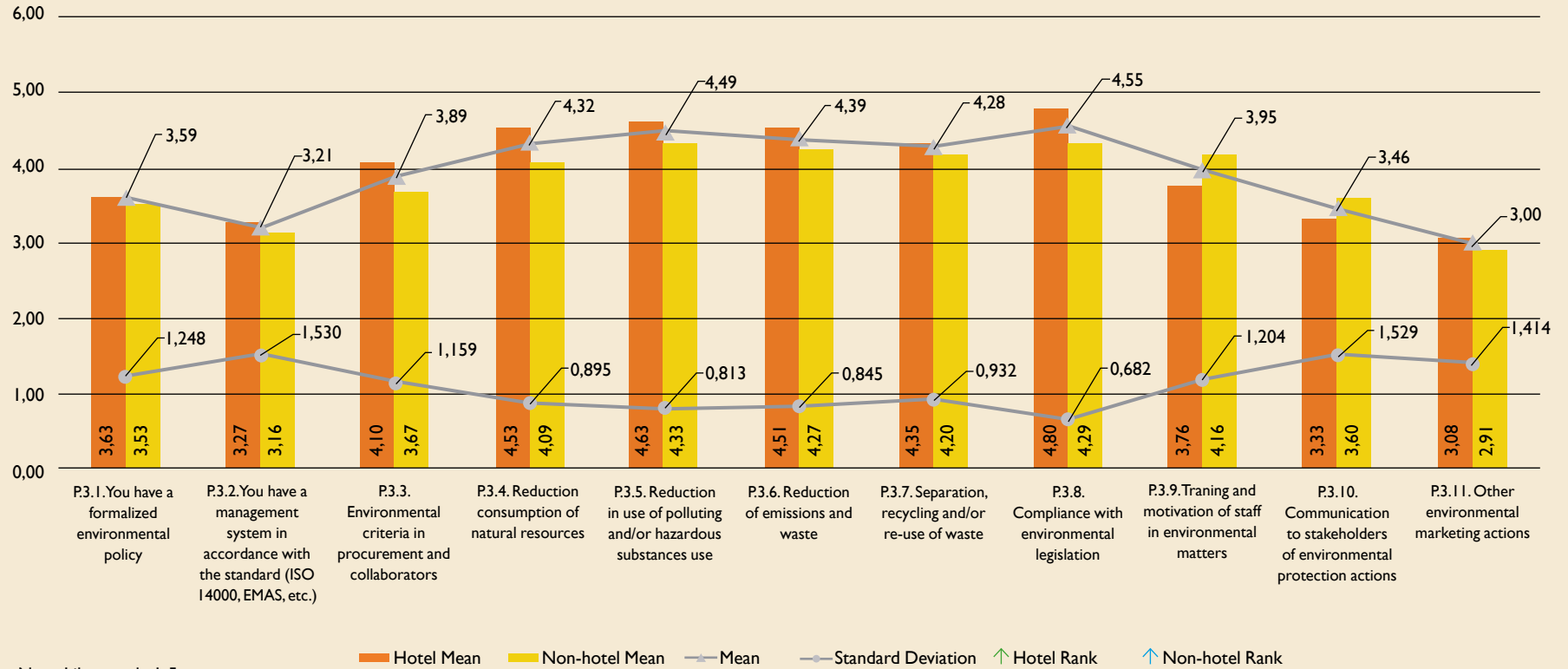
In the first case, hotel and non-hotel establishments coincide in reporting variables P4.13 and P4.3 as the most relevant motivating factors, and P4.10 as the least important. The ability to attract financial resources (P4.1) and social pressure (P4.12) have a low level of importance for both types of establishments. Finally, because of their particular relationship with the destination's governance, managers say that public incentives (subsidies, tax benefits, etc.) to compensate for the economic effort involved in environmental protection are insufficient to foster the commitment of these companies (P4.4).

As regards barriers, there is a consensus on placing scarcity of financial resources (P5.2) in first place and items P5.6, P5.7 and P5.8 in the bottom places in terms of their importance, referring to the lack of commitment on the part of the main influential external agents in the management of the company.

In addition, the Spearman's Rho coefficient (**table 1**) determines the correlation between the motivations and difficulties for environmental management and the level reached in the environmental management, measured by the continuous variable P3, obtained by Factor Analysis (extraction method: Principal Component Analysis) by the reduction to one factor of the 11 items indicative of the environmental protection practices applied by the accommodations (P3.1 – P3.11).



Figure 1. Descriptive statistics of environmental management actions



Note: Likert scale 1-5

ENVIRONMENTAL MANAGEMENT OF THE TOURIST ACCOMMODATION INDUSTRY AND SUSTAINABLE GOVERNANCE IN A PROTECTED AREA  
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Figure 2. Descriptive statistics of the motivations

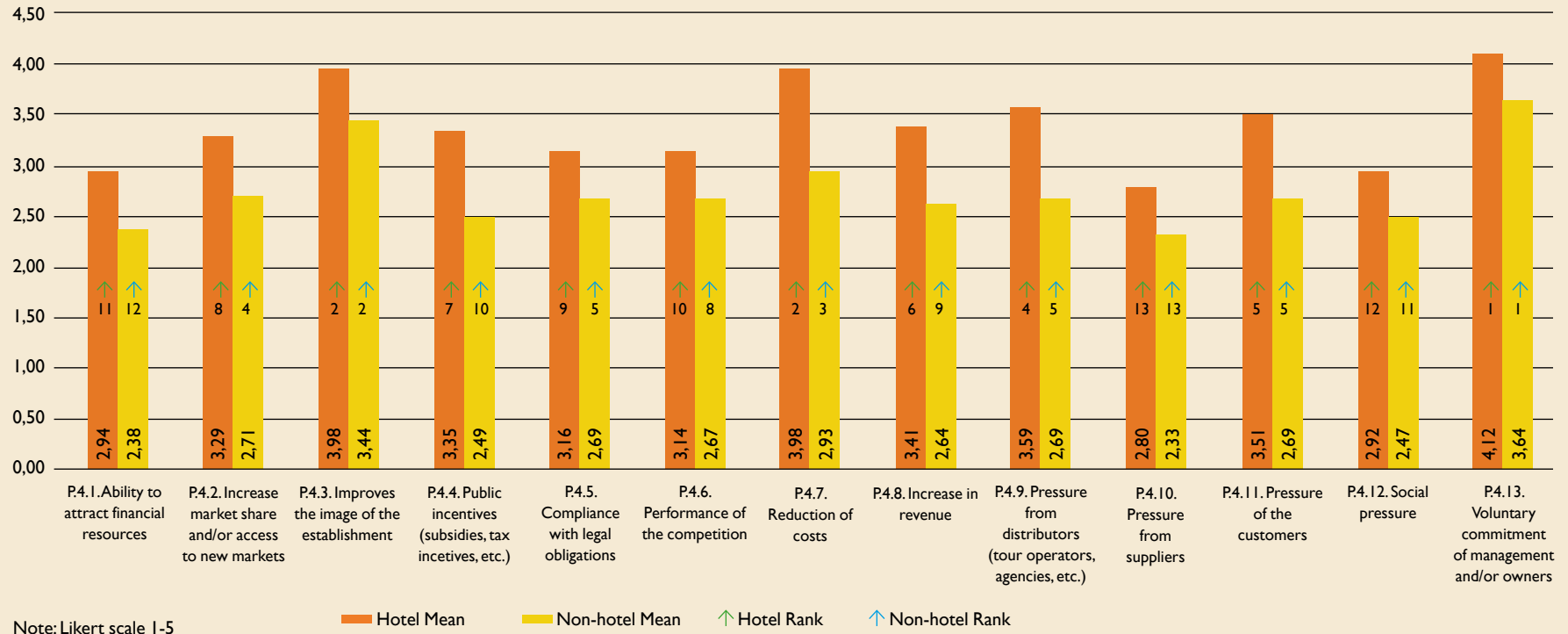
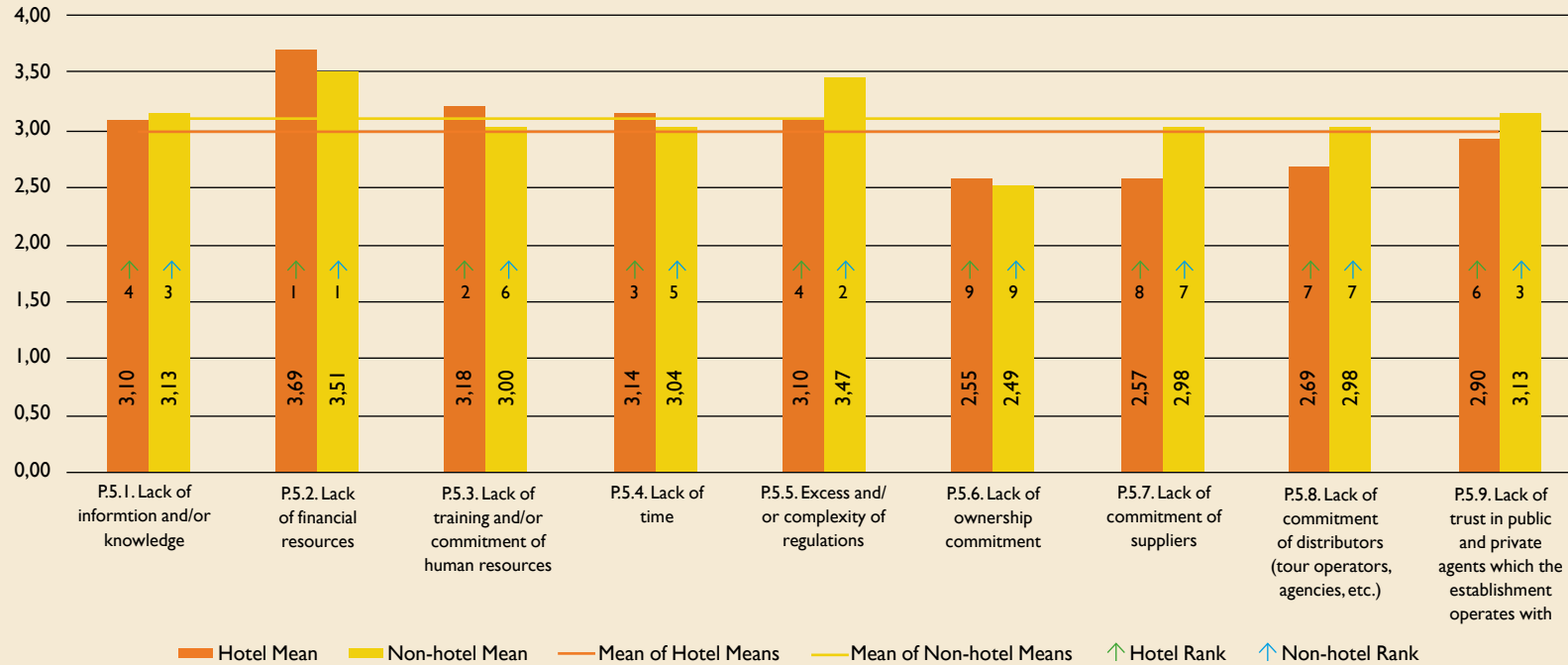


Figure 3. Descriptive statistics of the difficulties



Note: Likert scale 1-5

For comparative purposes, it is particularly interesting the co-variation analysis in the case of those incentives and barriers that managers consider less important (P4.1, P4.10 and P5.6), in case, contrary to the managers' perception, they present a behavioural pattern correlated with the improvement of environmental management.

The correlations between P3 and those incentives and barriers that managers consider more and less important (except P4.10 'Pressure from suppliers' and P5.6. 'Lack of ownership commitment') are significant. In all cases the correlation is positive or direct and the intensity of the relationship is mostly moderate or low (except the motivations P4.3 'Improves the image of the establishment', and P4.13 'Voluntary commitment of management and/or owners', highly correlated with P3).

Additionally, the positive correlation (low intensity) of the level of environmental management of the establishments (P3) with their motivations P4.2, P4.5, P4.6, P4.8 and P4.9 has also been significant. It should be noted that the correlation of P3 with the barriers is significant only in the case of P5.2. 'Lack of financial resources'. According to the previous literature (Armas-Cruz, 2011, Brammer *et al.*, 2012, Lawrence *et al.*, 2006), the positive relationship between both variables could be explained because SMEs suffer greater pressure of this financial barrier and this favors, as can be seen in the present results (**figure 1**), that these companies prioritize those environmental protection actions aimed at saving costs and relegate those practices that require greater investment of resources.

Table I. Correlation analysis. Spearman's Rho

VARIABLES		CORRELATION COEFFICIENT	SIG. (2-TAILED)
P3	P4.1. Ability to attract financial resources	.528	.000***
P3	P4.2. Increase market share and/or access to new markets	.611	.000***
P3	P4.3. Improves the image of the establishment	.604	.000***
P3	P4.4. Public incentives (subsidies, tax incentives, etc.)	.107	.306
P3	P4.5. Compliance with legal obligations	.223	.031**
P3	P4.6. Performance of the competition	.281	.006***
P3	P4.7. Reduction of costs	.149	.151
P3	P4.8. Increase in revenue	.224	.030**

P3	P4.9. Pressure from distributors (tour operators, agencies, etc.)	.280	.006***
P3	P4.10. Pressure from suppliers	.195	.059
P3	P4.11. Pressure of the customers	.100	.338
P3	P4.12. Social pressure	.176	.090
P3	P4.13. Voluntary commitment of management and/or owners	.483	.000***
P3	P5.1. Lack of information and/or knowledge	.035	.738
P3	P5.2. Lack of financial resources	.248	.016**
P3	P5.3. Lack of training and/or commitment of human resources	-.087	.405
P3	P5.4. Lack of time	.021	.841
P3	P5.5. Excess and/or complexity of regulations	.168	.105
P3	P5.6. Lack of ownership commitment	-.052	.618
P3	P5.7. Lack of commitment of suppliers	-.146	.162
P3	P5.8. Lack of commitment of distributors (tour operators, agencies, etc.)	-.176	.090
P3	P5.9. Lack of trust in public and private agents which the establishment operates with	-.097	.355

\*\*The correlation is significant at level 0.05 (2-tailed).

\*\*\*The correlation is significant at level 0.01 (2-tailed).

### 3.3. Environmental management and governance

The next step is to determine the existence of a correlation between the environmental management of the hotel sector in Fuerteventura and the action of the managing institutions of the sustainable governance of this destination, more specifically, the governing body of the Biosphere Reserve and other competent public administrations. **Table 2** shows the existence of a significant positive relationship, of low intensity, between P3, proxy of the level of environmental management, and P1.2 ('The fact that Fuerteventura is a Biosphere Reserve has meant that your establishment places more importance on social responsibility')<sup>6</sup>.

**Table 2. Correlation analysis of sustainable destination governance. Spearman's Rho**

VARIABLES		CORRELATION COEFFICIENT	SIG. (2-TAILED)
P3	P1.2	.316	.005***
P3	P7.7	.580	.000***

\*\*\*The correlation is significant at level 0.01 (2-tailed).



Likewise, this correlation is significant in the case of item P7.7 (‘You implement socio-environmental sustainability actions in collaboration with the public sector’), linking progress in the environmental management of the accommodation sector with the coordination and collaboration with the public authorities responsible for sustainability.

### 3.4. Accommodation supply features

Finally, the Mann-Whitney U-test determines the existence or not of significant differences between the two types of accommodation (hotel and non-hotel), both in their environmental behaviour and in their influence on the destination governance. **Table 3** shows the items for which the difference, positive or negative in each case, between the mean values of the responses from the two types of establishment is significant.

Table 3. **Contrast of difference of means.**

ITEM	HOTEL	NON-HOTEL	MANN-WHITNEY U-TEST	ASYMP. SIG. (2-TAILED)
	Mean	Mean		
<b>Governance in the area of sustainability</b>				
P7.7. Your establishment implements socio-environmental sustainability actions in collaboration with the public sector	2.96	2.31	846.5	0.042**
<b>Environmental management applied by the establishments</b>				
P3.4. Reduction in consumption of natural resources	4.53	4.09	842	0.029**
P3.8. Compliance with environmental legislation	4.80	4.29	724	0.001***
<b>Reasons that motivate your socio-environmental responsibility</b>				
P4.4. Public incentives (subsidies, tax incentives, etc.)	3.35	2.49	735	0.004***
P4.7. Cost reduction	3.98	2.93	738.5	0.004***
P4.8. Increased revenue	3.41	2.64	770.5	0.01***
P4.9. Pressure of distributors (tour operators, agencies, etc.)	3.59	2.69	683.5	0.001***
P4.11. Pressure of the customers	3.51	2.69	751	0.007***

\* Correlation is significant at level 0.1 (2-tailed). Level of confidence: 90%.  
 \*\* Correlation is significant at level 0.05 (2-tailed). Level of confidence: 95%.  
 \*\*\* Correlation is significant at level 0.01 (2-tailed). Level of confidence: 99%.

With regard to barriers, there are no significant differences between the two groups of establishments. Neither do they differ in their perception of the positive influence exerted on their environmental performance by the consideration of Fuerteventura as a Biosphere

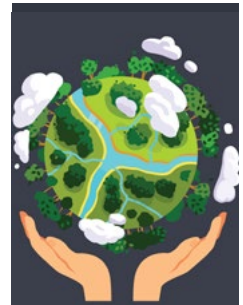
Reserve and, therefore, the governance actions of the destination associated with that special protection.

#### 4. CONCLUSIONS

As the destination is a protected area (Biosphere Reserve), firstly we wanted to evaluate, in an exploratory manner, the level of environmental commitment made by the hotel sector. The data show a medium-high development, focused on practices linked to regulation and those that do not involve a large amount of resources (economic, human or technical) or even entail a reduction of direct costs, coinciding with Font et al. (2016). This is the case of savings in natural resources (water, energy, etc.), and reducing the use of harmful substances in the operational management of accommodation and restaurant services. Comparatively, there are lower levels of systematization and integration of environmental management in the strategic planning process of these companies under recognized standards such as ISO 14000 and EMAS.

Therefore, Fuerteventura tourist accommodation is progressing, depending on the availability of resources, with initiatives such as formalization of environmental policy and training and motivation of the personnel to include them in corporate environmental objectives. Likewise, effective communication of the efforts made in socio-environmental responsibility, directed to influential agents (distributors, customers, public administration, environmental protection agencies, pressure groups, local community, etc.), is necessary. A better and greater diffusion would favour the confluence of accommodation interests and stakeholders.

To better understand the determinants that explain the situation described above, the analysis of the motivating factors and barriers reveals that the environmental performance of these companies originates, fundamentally, in the voluntary commitment of the management and/or the owners. The managers also declare that responsible and sustainable behaviour significantly improves the reputation of the establishment, even though they say that they do not feel significant pressure from society in this regard. On the other hand, it is worth reflecting on the scarce motivational capacity of the economic-financial and market stimuli, that is to say, accommodation managers do not perceive, at least in the short term, commercial benefits (increase of market share, potential for generating higher



incomes by means of prices, etc.) deriving from their greater commitment to environmental protection, although they do recognize the possibility of relative savings in terms of direct (operational) costs. These conclusions, which agree with previous evidence (Lawrence et al., 2006; Hofmann et al., 2012), have important implications for the governance of the protected destination. Public administrations must take into account that the collaboration of the accommodation sector is essential for the maintenance of the objectives and the inherent requirements in the consideration of Fuerteventura as a Biosphere Reserve. However, such collaboration involves a considerable effort for these companies which, to date, is almost exclusively voluntary and limited to compliance with legislation. Therefore, in order to make significant progress, coordination and governance systems should be proposed to increase incentives or at least to remove the barriers to greater corporate commitment to sustainability.

The conclusions about the motivations of the tourist accommodation sector to develop its environmental management are congruent with those that are extracted when analysing the difficulties faced. According to its managers, the hotel sector in Fuerteventura does not meet the advanced level of environmental protection, as noted in the first objective of this study, due to the scarcity of financial and human resources - specifically in terms of lack of training and involvement of staff, time, information and knowledge. This corroborates the precedents of Carmona-Calvo et al. (2016). This scarcity of resources is partially offset by the voluntary commitment of the owners and management and the collaboration of the main stakeholders, such as customers, distributors (tour operators, agencies, etc.) and suppliers. On the other hand, in relation to the destination's governance, the disconformity of the establishments with the quantity and complexity of the regulation is noteworthy. The establishments also demand greater trust in relations with public agents in the area of sustainability, especially in non-hotel accommodation. Once again, these aforementioned points are clear indicators of challenges to be addressed, through public-private collaboration, in the face of the challenge of sustainable governance of a Biosphere Reserve destination.

Previous conclusions, resulting from the direct perception of the managers, are put in perspective with the global level of environmental protection reached by the establishments. In this sense, the analysis of correlations (table 1) complements the vision



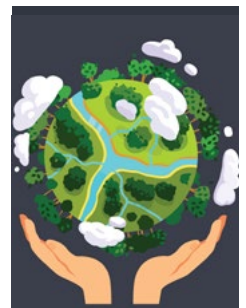
of the accommodations on the factors with greater influence to encourage and hinder their environmental commitment. In this sense, on the side of barriers, only the scarcity of financial resources appears significantly correlated with the level of environmental management of the sample analysed. On the other hand, the improvement of the image of the establishment is the most intensely correlated motivation with environmental action, accordingly with managers' perception.

Up to this point, there has been an analysis of the role played by the hotel industry in the environmental conservation of a protected area such Fuerteventura, which is under great pressure from the number of tourists who visit it. The next step is to analyse whether this role is aligned with an institutional and governance reference framework oriented towards sustainable development.

In this sense, the present study reveals that the environmental performance of the sector improves in line with the direct collaboration with the competent administration and, particularly, from the classification of the island as Biosphere Reserve. In the opinion of the managers surveyed, the Biosphere Reserve status has favoured the environmental progress experienced by the sector, and there is still much potential for improvement. Therefore, the data show that public-private collaboration is favourable both to the sustainable governance of the destination as a whole and to the improvement of the environmental performance of the companies involved. However, at the same time the results indicate the need for greater and better public-private coordination, as well as regulatory simplification and greater institutional support in terms of resources such as information and training aimed at the sectors especially linked to tourism governance such as the accommodation industry.

Finally, it is necessary to distinguish between the two types of accommodation on the island -hotel and non-hotel-, which are clearly differentiated in their organizational configuration. The aim is to determine whether there are peculiarities that require a differentiated treatment for both accommodation groups in the design of policies and in the configuration of the destination's governance. This is another novel contribution of the study and relevant because it advances in the identification of guidelines, both for management and for public administration, specific to the management of each type of offer.

In this regard, the data reveal, on the one hand, that the environmental protection of hotel and non-hotel accommodation is



highly homogeneous, differing only in the reduction of consumption of natural resources and compliance with regulations, where the hotel sector is better. On the other hand, differences are more visible in motivations, where the hotels perceive more pressure from stakeholders (mainly customers and distributors) than the non-hotel businesses, as well as more economic and financial incentives such as cost reduction and increased revenues. However, as explained above, these motivations have a low level of importance for both accommodation groups.

These findings, particularly relevant to the managers of non-hotel accommodations who perceive a lower level of external pressure, indicate that they have the opportunity to voluntarily improve their environmental commitment while increasing their cost efficiency. This initiative could be reinforced through collaboration with the managing administration of the protected destination. In this sense, hotels' managers perceive public incentives for environmental management to a greater extent (subsidies, tax incentives, etc.).

There are also no differences between both types of establishments in those indicators that reflect the most advanced level in environmental management, such as having a formalized environmental policy or strategic and operational planning according to demanding standards such as ISO 14000 or EMAS. The latter shows that the mean level of environmental commitment made so far is homogeneous across the industry, which has direct implications for public decision-making on policies to promote and encourage excellence in environmental quality.

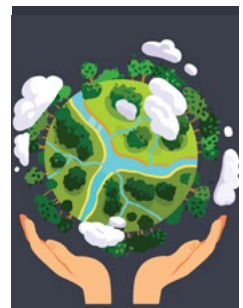
However, collaboration between the sector and administrations concerning environmental protection is greater in the case of hotels than in the non-hotel establishments. The managerial and administrative implications in this regard are clear, indicating the need to promote links and a greater integration of the non-hotel sector in environmental protection public initiatives and vice versa. The latter will be key to the success of the sustainability governance model designed for this destination.

In summary, these findings contribute, on the one hand, to the need for empirical advances in the knowledge of sustainable governance in protected areas and, secondly, focusing on the particularities of the tourism sector, much less studied than others like the industry.

Finally, with regard to the limitations and future lines of research, it should be pointed out that this work is a descriptive and preliminary



approach and will be followed by a further development of aspects that are beyond the scope of the exploratory analysis. The incorporation of additional variables, measuring and contrasting the perspective of the institutions, and the application of complementary methods of analysis (e.g. linear regression) will provide more conclusive results. For example, priority will be given to studying the implications of the 'sustainable' governance of the destination in the competitiveness of the hotel sector, for which it would also be advisable to extend the geographical scope of the study, thereby making comparisons with other destinations with similar characteristics.



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## NOTES

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  3. Data from: World Tourism Organization Network (2016). UNWTO Tourism Highlights, 2016 Edition. Available at: <http://mkt.unwto.org/publication/unwto-tourism-highlights-2016-edition>.
  4. Data from: Promotur (2016). Turismo de Canarias 2016. Available at: <http://www.turismo-decanarias.com/promoturturismocanarias/informes-y-estadisticas/>
  5. The complete definition of the items (environmental protection practices, motivations and barriers) is included in the results graphs 1 to 3, respectively.
  6. Likert scale 1-5.
- The items included in this paper are extracted from a larger questionnaire designed for a national research project, with a larger scope and additional objectives.

