EVALUATION OF TOURISM MANAGEMENT IN THE BOSQUE DE PÓMAC HISTORIC SANCTUARY, PERU

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Resumo

Avaliação da gestão do turismo no Santuário Histórico Bosque de Pómac, Peru. Esta pesquisa teve como objetivo avaliar a gestão do turismo no Santuário Histórico da Floresta de Pómac, na região de Lambayeque, Peru, desenvolvendo uma metodologia para o uso de critérios e variáveis relacionadas à sustentabilidade da área natural protegida e da atividade. Embora existam várias metodologias que permitem avaliar o manejo geral de áreas naturais protegidas, este trabalho se concentra exclusivamente na atividade turística de uma área específica. Para desenvolver a metodologia, documentos internacionais relacionados ao turismo, natureza e cultura foram revisados e seis critérios foram obtidos para avaliar o progresso do gerenciamento do turismo em áreas naturais protegidas: governança do gerenciamento, conservação do patrimônio, identidade e autenticidade, equidade e inclusão, marketing e comercialização e experiência do visitante. Em seguida, 56 variáveis foram selecionadas para serem avaliadas dentro dos seis critérios. Uma matriz de avaliação numérica foi definida em função dos critérios e variáveis, com quatro níveis de qualificação, tendo sido realizadas entrevistas semiestruturadas com 25 especialistas na área de turismo e áreas naturais protegidas (empresários, acadêmicos, consultores, funcionários públicos e empresários locais) ligados à área protegida, e foram obtidas informações de relatórios técnicos e inspeções de campo. Usando as pontuações, determinou-se que no Santuário os critérios de governança, conservação e experiência do visitante foram desenvolvidos positivamente, enquanto os problemas de identidade e autenticidade cultural, inclusão e equidade carecem ser aprimorados.

Palavras-chave: governança, sustentabilidade, áreas protegidas, turismo sustentável.

Abstract

The objective of this research was to evaluate the management of tourism in the Bosque de Pómac Historic Sanctuary, in the region of Lambayeque, Peru, by developing a methodology using criteria and variables related to the sustainability of the protected natural area and the activity. Although several methodologies can be used to evaluate the general management of natural protected areas, this study focuses exclusively on tourism-related activities in one specific area. To develop the methodology, international documents related to tourism, nature, and culture were reviewed, and six criteria were obtained to evaluate the progress of tourism management in natural protected areas: Management Governance, Heritage Conservation, Identity and Authenticity, Equity and Inclusion, Marketing and Commercialization, and Visitor Experience. Subsequently, fifty-six variables were determined to be evaluated within the six criteria. A numerical evaluation matrix was designed in order to be applied to the criteria and variables with four rating levels; semi-structured interviews were conducted with twenty-five specialists in the area of tourism and natural protected areas (businesspeople, academics, consultants, public officials, as well as local entrepreneurs) linked to the protected area, and information was obtained from technical reports and field inspections. Using the scores, it was determined that the sanctuary has positively developed the criteria of Governance, Conservation, and Visitor Experience, while the issues related to Cultural Identity and Authenticity, as well as Inclusion and Equity, still need to be improved.

Keywords: governance, sustainability, protected areas, sustainable tourism.

INTRODUCTION

Natural protected areas are a key element for any global initiative or strategy aimed at the conservation of nature. While the generation of financial income from entrance fees to natural protected areas is important (very often, the presence of visitors depends on the beauty of landscapes, healthy flora and fauna, attractive activities, and the presence of authentic cultures) and directly and indirectly benefits local people and businesses, tourism also contributes to strengthening the connection of visitors with the values of natural protected areas, which will help raise their awareness regarding the conservation of the heritage that these areas involve.

Tourism in natural protected areas is an important component of the global tourism industry, as it generates employment and has positive impacts on the economy, society, and culture. If tourism activities are inappropriate or poorly managed, their negative impacts can be widespread, affecting protected area resources, local economies and communities, as well as the tourists themselves (LEUNG *et al.*, 2018).

At an international scale, since the late 1990s and throughout the current century, extensive work has been performed on the integrated as well as the adaptive management systems of natural protected areas, as well as on the development of tools to evaluate the effectiveness of area management. Examples of this include measuring the effectiveness of protected area management proposed by Cifuentes, Izurieta, and De Faria (2000), with the support of WWF, GTZ, and IUCN, where a series of indicators are selected, basing the rating on primary and secondary data collection; the Rapid Assessment and Prioritization of Protected Area Management - RAPPAM (ERVIN, 2003), a qualitative methodology that allows for surveying the situation of the region or country being evaluated and to make broad comparisons based on the effectiveness of management between the different areas under evaluation and even between different countries. This methodology has been applied in Brazil for the evaluation of its conservation units since 2004, where it has been used to assess more than 500 areas up to 2015 (WWF, 2017): the study conducted by COOK, HOCKINGS (2011), which strengthens the RAPPAM methodology; the study performed by the Ministry of Environment of Ecuador (2014), which developed a methodological guide to evaluate the effectiveness of the management of State-owned natural heritage; the global study of changes over time of the effectiveness of the management of areas conducted by GELDMANN *et al.* (2015); and the open standards for conservation practice (CONSERVATION MEASURES PARTNERSHIP, 2020), which based on the adaptive management approach, proposes a process of evaluation, planning, implementation, analysis, and adaptation, as well as dissemination and exchange, seeking the reduction of subjectivities in decision-making. This study uses elements developed in the aforementioned methodologies, especially the use of primary information gathering, interviews with key people, and the use of criteria, variables, and sub-variables to specifically evaluate one of the activities that can have the greatest impact, either positive or negative, on a natural protected area, which is Tourism Management.

The objective of the research was to develop a methodology allowing for the evaluation of tourism management in a natural protected area, and apply it to the Bosque de Pómac Historic Sanctuary (SHBP, for its Spanish acronym), using a scoring system of criteria and variables that cover the different elements involved in this activity. In addition to helping manage tourism in the area, the goal is to contribute to better planning sustainable tourism activities in areas that currently have visitors, and in other areas that have the potential to develop the activity. This methodology could even be adapted to other areas, such as archeological sites and private recreation or rural tourism areas, by changing the number of variables in each criterion, given the special nature of each of them.

MATERIALS & METHODS

Study Area

The SHBP is located within the equatorial dry forest ecoregion, on the western slope of the Andes. The Peruvian tropical dry forest is an ecosystem of high endemic value, biological-cultural richness and scenic beauty, which has been threatened by social conflicts and irresponsible management of its resources (GONZALES MANTILLA; NERI, 2015). Except for the intense rainfall that occurs during the El Niño phenomenon, during most years, precipitation is scarce and barely allows for the growth of vegetation such as trees and shrubs. These forests are also important because they provide a natural barrier to the shifting sand and advancing deserts typical of the northern part of the country.

The SHBP is a natural protected area (NPA) managed by the National Service of Natural Protected Areas of Peru (SERNANP, for its Spanish acronym), located in the province of Ferreñafe, in the department of Lambayeque, in northern Peru, and protects the largest and densest formation of carob trees (*Prosopis pallida*) (H. et Bonpl. ex Willd.) H.B.K. on the planet. Its 5887.38 hectares contain a mixture of biological and cultural diversity that offer visitors a unique combination of nature and history. The area preserves typical dry forest species and 36 pyramids of the Sicán culture, an important pre-Inca culture of northern Peru (SERNANP, 2018).

Data Collection & Analysis

The study used a qualitative approach from different social research methodologies and was developed in four stages. The first stage consisted of an analysis of six international declarations, codes, and charters related to sustainable tourism, nature and culture, in order to identify the most relevant criteria for the evaluation of tourism management in natural area systems. These documents of international relevance make up a tool for discussion, negotiation, cooperation, and compromise, which allows for developing regulations that recover the specific characteristics of the parties to address global issues. In order to select them, the following conditions had to be met: (i) the event that resulted in the document had to be organized by globally recognized institutions; (ii) tourism, nature, and culture had to prevail in the documents; (iii) the declarative nature of the documents; (iv) the consensual values, both during the events where they were generated and *a posteriori*, in the academic community, and (v) the summary referential value in terms of good practices in tourism management. Once chosen, the documents were reviewed in depth, noting the criteria that had the greatest impact on them. The information was systematized

in matrices where the most common topics were grouped, and six criteria were finally selected as the basis for the following stages.

The second stage consisted of designing an evaluation model for tourism management in the natural protected area. The objective of this stage was to have a base evaluation matrix for tourism management in natural protected areas with rating scales. The matrix was sought to meet the following conditions: to be easily replicable, able to provide consistent data to allow monitoring of progress over time, able to provide a "score" of the protected area, and to be easily understood (MINISTRY OF THE ENVIRONMENT OF ECUADOR, 2014). The matrix had as a base element the six criteria worked on in the first stage of the research. Variables were added to each of these criteria so that, when added up, they could cover the implications of each criterion in the best possible way. The sum of all of the variables of the six criteria should cover all the conditions for relevant tourism management in each area. The methodologies mentioned in the introduction were analyzed and used as inputs for the design of the matrix.

During the third stage, the three methods were determined to obtain the most reliable information to fill out the evaluation matrix, using the study by Mayorquín *et al.* (2010) as a reference point: data collection from secondary information, field verification visits, and in-depth interviews with key people related to the sanctuary based on a dialogue guide that would help characterize the evolution of the actions taken in the area in relation to tourism, as well as to the natural and cultural attractions present in the sanctuary. The dialogue guide included 27 questions, based on the six criteria identified in the first stage, seeking to obtain opinions on the strengths and weaknesses of the sanctuary, in order to define the limitations and potential of its tourism activity; also, to obtain information from the local population, the services that have been activated throughout the years, as well as the evolution of tourist demand at the location in the last eighteen years: profile of the clients, their preferences, requirements, and suggestions, including the problems they encountered. Twenty-five direct interviews were conducted with people who have extensive knowledge and experience of the Bosque de Pómac Historic Sanctuary. Among them were the head of the sanctuary, former heads of the area, former as well as current SERNANP officials, both in Lima, where the headquarters are located, and in the Lambayeque Region; tourism entrepreneurs, tourism and nature consultants, and members of the ANP Management Committee. The 25 interviewees included 13 public officials, five businesspeople, four consultants, and three local leaders. The structuring of the topics addressed in the conversation had the objective of helping to conduct the interview, so that the interviewer would be free to develop each situation with the necessary flexibility, allowing for a broader exploration of an issue. The purpose of this type of interview is to obtain from the interviewee what they think about the subject, the most relevant aspects of a given problem, in addition to other considerations of the interviewee, serving as support in verifying the results of the documentary sources.

In addition, the available documents provided by the natural protected area, SERNANP and other public and private institutions were reviewed, as well as the answers given by the interviewees and other possible sources, plus the field inspections carried out by the researcher.

The fourth stage consisted of the application of the tourism evaluation matrix in the SHBP, with the objective of testing the effectiveness of the matrix prepared with the contributions of the specialists. In order to give the level of rating to each criterion, taking into account that each criterion does not have the same number of variables that help to analyze it, the following formula was applied:

$$P = X_1 + X_2 + X_3 + \cdots + X_n$$

Where:
P = criterion score
X = variable score
n = number of variables per criterion

This is how the scores for each criterion were obtained. In the case of the visitor experience criterion, given the greater number of variables to be applied in relation to the other criteria, the variables were divided into three sub-criteria in order to work on them separately, and then consolidate them to obtain the average score for the criterion.

To obtain the ranges that would determine the progress obtained in each criterion, the maximum possible score for each criterion was calculated and divided by five in order to obtain the five qualitative rating levels:

$$R = \frac{N \; x \; 3}{5}$$

Where:
R = factor of the rating ranges per criterion.
N = number of variables per criterion

The rating ranges were: Not at all satisfactory, Not very satisfactory, Moderately satisfactory, Satisfactory, and Highly satisfactory. The score for each criterion was compared with the five existing ranges for each criterion, and the rating for each criterion was obtained. Finally, in order to obtain the overall rating for the area, the total score of the sum of the six criteria was calculated and was then divided by five to obtain once more five rating ranges. The sum of the scores achieved for each criterion was contrasted with these ranges and the final rating for the area was obtained. This information allowed for a situational analysis of tourism management in the protected natural area.

RESULTS

Results of the Analysis of the International Documents

The six documents that met the conditions stipulated in the methodology presented in Table 1 are: the Charter for Sustainable Tourism (WORLD CONFERENCE ON SUSTAINABLE TOURISM, 1995); the Environmental Code of Ethics for Tourism (WORLD TOURISM ORGANIZATION, 1999); the Quebec Declaration on Ecotourism (UNITED NATIONS ENVIRONMENT PROGRAMME, WORLD TOURISM ORGANIZATION, 2002); the Cape Town Declaration on Responsible Tourism (INTERNATIONAL CONFERENCE ON RESPONSIBLE TOURISM IN DESTINATIONS, 2002); the Malaga Charter on Fair Tourism (INTERNATIONAL MEETING ON FAIR TOURISM, 2006), and the Muscat Declaration on Tourism and Culture (WORLD TOURISM ORGANIZATION *et al.* , 2017). From the in-depth review of the documents, the six criteria for evaluation were obtained: Management Governance, Heritage Conservation, Cultural Identity and Authenticity, Inclusion and Equity, Marketing and Commercialization, and Visitor Experience.

Design and Application of the Evaluation Matrix

Based on the aforementioned criteria, a varying number of variables were assigned to each of the six criteria, with the number of variables dominating the visitor experience criterion, given the different stages of the visit. Each variable was assigned four levels of compliance, to which a score had to be given according to the degree of progress obtained, seeking to make the four alternatives as objective as possible, in order to facilitate the evaluation of the criteria and variables. The first five criteria had between four and eight variables for rating. The sixth criterion, which has twenty-seven variables related to the visitor experience, was treated differently. The criterion was divided into three parts to be evaluated independently: accessibility and arrival services to the area; services for exploration and learning, and visitor support protocols and services. In the end, a total of 56 variables were assigned. A four-point scale (0, 1, 2 and 3) was designed in order to score each variable. The intention was for the evaluator to define the level of progress for each variable: 0 when there has been no or minimal progress; 1 when there has been some progress; 2 when there is significant progress, but still room for improvement; and 3 when the optimal situation has been reached or is close to being reached. The four alternatives helped the evaluator to judge what has been achieved in each variable. Each of the variables was assigned a score by the evaluator based on available information, field verifications, and feedback from the interviews. The following results were obtained for each criterion (see Table 1 – Assignment of Scores).

Table 1. Assignment of scores to the variables of the evaluation matrix for Tourism Management in the Bosque de Pómac Historic Sanctuary.

Tabela 1. Atribuição de pontuação às variáveis da matriz de avaliação da Gestão Turística no Santuário Histórico Bosque de Pómac.

Criteria and Variables evaluated for Tourism Management in the SHBP		SCORE
1	*Management Governance*	
1.1	Official Management Instruments	3
1.2	Prioritization of Tourism	2
1.3	Effectiveness of Zoning	3
1.4	Staff Efficiency	2
1.5	Involvement of Cultural Managers	1
1.6	Involvement of the Tourism Management Committee	2
	Management Governance Criterion Score	**13**
2	*Heritage Conservation*	
2.1	Biodiversity Inventory	1
2.2	Inventory of Archaeological Sites	3
2.3	Inventory of Expressions of Living Culture	2
2.4	Monitoring of Natural Tourism Resources	1

2.5	Monitoring of Archaeological Tourism Resources		2
2.6	Involvement of the Conservation Management Committee		2
	Heritage Conservation Criterion Score		**11**
3	*Cultural Identity and Authenticity*		
3.1	Expressions of Ancestral Cultures		2
3.2	Economic and Productive Use of Resources		1
3.3	Informative Material on Natural and Cultural Values		0
3.4	Souvenirs with Local Identity		1
	Cultural Identity and Authenticity Criterion Score		**4**
4	*Inclusion and Equity*		
4.1	Participation of the Local Population in Tourism		3
4.2	Hiring of Local Staff by Companies		1
4.3	Support Mechanisms for Communities		2
4.4	Training in Tourism provided for the Local Population		1
4.5	Inclusion of People with Disabilities		0
	Inclusion and Equity Criterion Score		**7**
5	*Marketing and Commercialization*		
5.1	Activity of Tour Operators		3
5.2	Priority of the Area in the Destination		2
5.3	Information regarding the Demand in the Area		1
5.4	General Information about the Area on Digital Media		1
5.5	Tourist Information about the Area on Digital Media		1
5.6	Registration of Service Providers in the Area		2
5.7	Visitor Data		2
5.8	Visitor Satisfaction Measuring		1
	Marketing and Commercialization Criteria Score		**13**
6	*Visitor Experience*		
6.1	**Accessibility and Arrival Services to the Area**		
6.1.1	Alternatives for Access to the Area		3
6.1.2	Condition of the Main Road to the Area		3
6.1.3	Alternative Access Routes to the Site		2
6.1.4	Signs or other Indicators to facilitate arrival at the Site		3
6.1.5	Parking		3
6.1.6	Ticketing System for Entrance Ticket Sales		2
6.1.7	Visitor Reception Area		2
6.1.8	Toilets in the Reception Area		3
6.1.9	Basic Code of Conduct for Visitors		1
6.1.10	Interpretation Center		2
6.1.11	Equipment Rental Service		2
	Sub-criterion Score for Accessibility of and Arrival to the Area (26 points out of 11 variables)		**26**
6.2	*Exploration & Learning*		
6.2.1	Area Informative Directory Board		3
6.2.2	Service of Local Guides or Counselors		2
6.2.3	Trails for Visitors		2
6.2.4	Signs on Trails and Attractions		2
6.2.5	Facilities to Support Tourism Activities		2
6.2.6	Interpretive Resources in the Field		1
6.2.7	Toilet Facilities near Major Attractions		0
6.2.8	Solid Waste Disposal System		1
6.2.9	Cafeterias and Food and Beverage Outlets		3
6.2.10	Souvenir Store		2

		Sub-criteria Score for Exploration & Learning	18
	6.3	*Visitor Support Protocols & Services*	
	6.3.1	Access to Telephone Signal and Internet	1
	6.3.2	Protocols for Visitor Safety and Security	1
	6.3.3	Protocols for Emergency Response	1
	6.3.4	Protocols for Visitor Load Management	2
	6.3.5	Protocols for Solid Waste Management	1
	6.3.6	Visitor Service System	1
		Sub-criterion Score for Protocols and Services	**7**
		Visitor Experience Criterion Score (sum of the three sub-criteria)	**51**

Source: Own preparation (2020).

Table 2 shows the rating ranges for each criterion that will be used as a reference for the qualitative rating of each of the criteria, as explained in Stage Four of the methodology.

Table 2. Rating ranges assigned to the six criteria for the Evaluation of Tourism Management in the Bosque de Pómac Historic Sanctuary

Tabela 2. Faixas de classificação atribuídas aos seis critérios da Avaliação da Gestão do Turismo no Santuário Histórico Bosque de Pómac

Rating Ranges	Governance (6 variables)	Conservation (6 variables)	Identity & Authenticity (4 variables)	Inclusion & Equity (5 variables)	Marketing & Commercialization (8 variables)	Visitor Experience (27 variables)
Maximum Score	18	18	12	15	24	81
Not at all satisfactory	0.0-3.6	0.0-3.6	0.0-2.4	0.0-3.0	0.0-4.8	0.0-16.2
Not very satisfactory	3.7-7.2	3.7-7.2	2.5-4.8	3.1-6.0	4.9-9.6	16.3-32.4
Moderately satisfactory	7.3-10.8	7.3-10.8	4.9-7.2	6.1-9.0	9.7-14.4	32.5-48.6
Satisfactory	10.9-14.4	10.9.14.4	7.3-9.6	9.1-12.0	14.5-19.2	48.7-64.8
Highly satisfactory	14.5-18.0	14.5–18.0	9.7-12.0	12.1-15.0	19.3-24.0	64.9-81.0

Source: Own preparation (2020).

Table 3 shows the scores obtained in the SHBP evaluation, as well as the qualitative rating obtained for each criterion.

Table 3. Scores and Ratings assigned to the six criteria of the Evaluation of Tourism Management in Bosque de Pómac Historic Sanctuary.

Tabela 3. Pontuações e classificações atribuídas aos seis critérios da Avaliação da Gestão Turística no Santuário Histórico Bosque de Pómac.

	Criterion	Score	Rating
1	Management Governance	13/18	Satisfactory
2	Heritage Conservation	11/18	Satisfactory
3	Cultural Identity and Authenticity	4/12	Not very Satisfactory
4	Inclusion and Equity	7/15	Moderately Satisfactory
5	Marketing and Commercialization	13/24	Moderately Satisfactory
6	Visitor Experience	51/81	Satisfactory

Source: Own preparation (2020).

For the overall evaluation of the area, by combining the ratings obtained for the six criteria and using the maximum score to determine the points for the five ranges, the following result was obtained for the overall rating of the Bosque de Pómac Historic Sanctuary.

Table 4. Determination of the overall rating obtained for the Bosque de Pómac Historic Sanctuary.
Tabela 4. Determinação da classificação geral obtida para o Santuário Histórico Bosque de Pómac.

	Criterion	Score Maximum Possible: 168	Rating
1	Not at all satisfactory	0-33.6	
2	Not very satisfactory	33.7-67.2	
3	Moderately satisfactory	67.3-100.8	**Score obtained by SHBP: 99 (moderately satisfactory, very close to satisfactory)**
4	Satisfactory	100.9- 134.5	
5	Highly satisfactory	134.6-168	

Source: Own preparation (2020).

DISCUSSION

Criterion 1, Natural Resource Governance, "is a public-sector management model in which the necessary participation and confluence of different social actors involved in a conflictive decision-making process is recognized" (BRENNER; SAN GERMÄN, page 1). Scores two and three were predominant in this criterion, which reflects the availability of updated tourism planning documents, adequate zoning of the area that favors tourism development, prioritization of tourism among the main activities to be carried out in the area, as well as the interest of the management committee in contributing to it. One of the most important elements found was that not only the head office of the protected area is a decision-maker, but also the management committee, made up of various public and private actors, including representatives of the local communities. This is supported by the statement of Borrini-Feyerabend; Hill (2015), which points out how convenient it is for governance that decisions are made by a variety of actors that enrich and strengthen conservation in practice.

Criterion 2, Heritage Conservation, includes not only the natural heritage inherent to a protected natural area, but also tangible cultural heritage, which includes monuments, ensembles, sites and cultural artifacts, and intangible cultural heritage such as living expressions inherited from ancestors and transmitted to descendants, such as oral traditions, performing arts, social uses, rituals, festive events, knowledge, and practices related to nature and the universe, and knowledge and skills linked to traditional craftsmanship (UNESCO, 2011). The variables selected for the evaluation referred to inventories of biodiversity, archaeological sites, and living culture, with the understanding that these elements constitute the main attractions for tourists interested in nature and culture, finding that the best managed information is archaeological, where not only the main sites and remains are registered, but where they have been prepared for the enjoyment of the public, and ongoing research is conducted. More updated work and additional monitoring activities are pending, in order to strengthen the relationship between biodiversity and tourism, especially with regard to the diversity of birds, which is one of the main strengths of this forest in terms of nature tourism. This is strengthened by the statement of Leung *et al.* (2018) that tourism in protected areas helps the public receive education on heritage conservation issues, convey understanding and greater appreciation of the value of natural resources, and generate awareness of them, actions that are supported when the areas are shown to be well guarded and in a good state of conservation.

Criterion 3, Cultural Identity and Authenticity, is the criterion that proportionally obtained the lowest score. Work related to the cultural expressions present in the area or its surroundings has been relatively limited, except for the work done by the Sicán National Museum (ELERA, 2017), which presents them in its exhibitions, and isolated initiatives by local tourism entrepreneurs. Likewise, more informative material should be prepared related to the cultural values of the area, covering ceramics, textiles, narratives, and natural products processed by the local population. The weakness of this criterion generates a risk of serious impacts on social and cultural aspects, which threaten, according to Leung *et al.* (2018, page 25), "to commodify and devaluate ceremonies that are performed for tourists, causing changes in arts, crafts, costumes, festivals for exhibition; disruption of traditional patterns and schedules of cultural and religious ceremonies, and deterioration in the manufacture of handicrafts due to increased sales volumes to tourists."

Criterion 4, Equity and Inclusion, seeks to favor social equity, in accordance with what is advocated by the International Union for Conservation of Nature (IUCN, 2019, page 1), "proposing concrete mechanisms for the redistribution of wealth, resources, and opportunities, as well as the construction of a true intercultural and gender balance in decision-making related to projects and policies in this area." The evaluation has concluded that there are several areas for improvement. Although there are interesting initiatives to involve the local population in tourism activities, such as the sale of food and forest products like carob, pollen, and honey, and guided services by trained local guides, there is not yet a mass of visits that could help to significantly improve the income of local people. At the moment, tourism companies still do not hire local people, let alone people with disabilities. In this

aspect, the participation of local people in various modalities should be encouraged, because, as stated by Huaraca *et al.* (2017), this strengthens the processes of conservation of local resources.

As for Criterion 5, Marketing and Commercialization, it should be mentioned that a tourism product must be offered, in this case the activities within the sanctuary, in order to market it (Caamaño, 2011). The necessary activities should be planned and organized in order to position a good or service so that consumers know about it and consume it. The evaluation found that only one variable, the granting of rights to tourism enterprises in the area, has obtained the highest score. Several aspects in marketing need to be improved, such as a more exhaustive study by SERNANP and the area to work on social networks to disseminate characteristics and tourist attractions of the area to the general public. No major studies have been conducted on tourism demand in the region and the area, which makes it difficult to establish strategies to encourage visitors. Research projects should be initiated such as that developed by Parks Canada (JAGER, HALPENNY, 2012), which invests in research from the social sciences in order to document visitor attitudes towards natural protected areas, as well as use patterns, seeking to understand what their customers are looking for. Therefore, "it is important to understand the different types of tourists through research and analysis before adopting marketing strategies" (LEUNG *et al.,* 2018, page 57), and for this reason, studies should be conducted where the degree of satisfaction and coverage of visitor expectations are determined, which is not yet being done in the SHBP. It is difficult to get operators to "sell" Bosque de Pómac as a main attraction, as they are not yet convinced of what exactly tourists can develop there.

Criterion 6, Visitor Experience, refers in general terms to the satisfaction that visitors obtain from their visit. This is understood as a task and a responsibility shared by all: public officials, businesspeople, municipal officials, as well as other actors that make up the destination-system. The analysis of the first sub-criterion, related to accessibility and arrival services to the area, indicates that access to the area is simple and easy with a road in good condition. Upon arrival to the area, the main services are enabled or in the process of being enabled. The interpretation center and the proposed equipment rental should be improved, as well as the availability of codes of conduct for tourists, as clearly stipulated by the Global Code of Ethics for Tourism (UNWTO, 2019, art. 1), which states that tourists should refrain from behavior that may offend local people or damage the environment of the site. Generally speaking, the sub-criterion is on track. The second sub-criterion, which is related to exploration and learning, shows acceptable work in the habilitation of trails, boards and signs, as well as facilities to favor the contemplation of special places, although there are still pending issues related to hygienic services within the area and not only in the reception area, as well as the work related to solid waste. Good practices set out in Leung *et al.*, (2018, page 40), which suggest that facilities should "minimize potential damage and demonstrate durability, availability, sustainability, and recyclability, incorporate designs consistent with the physical and cultural landscape, as well as climatic conditions...and employ a combination of tools and techniques for visitor use management that reinforce and complement each other" should be met. In the third sub-criterion, which is related to visitor support protocols and services, the existence of such protocols has been rated, taking into account that they have been designed recently, but they do not obtain optimal scores, as it has not been possible to verify their effective implementation. In any case, more work needs to be done on developing protocols for handling environmental emergencies and accidents, telephone and internet access, and visitor services using remote means to answer queries. The protocol for visitor load management is well designed but its implementation cannot yet be said to be successful.

In conclusion, it can be observed that three of the six criteria: Management Governance, Heritage Conservation, and Visitor Experience, were rated satisfactory. Two of the criteria, Inclusion and Equity, as well as Marketing and Commercialization, were rated as moderately satisfactory, while Cultural Identity and Authenticity was rated as not very satisfactory.

The overall score obtained for the SHBP, adding the scores of the six criteria, was 99 points out of a possible score of 168, which causes it to be within the range of moderately satisfactory, approaching satisfactory, according to the ranges obtained. The information obtained made it possible to draw up a diagnosis of the progress made in the SHBP in relation to tourism, highlighting the achievements made and the deficiencies that need to be addressed, especially in the areas of Cultural Identity and Authenticity, Inclusion and Equity, as well as Marketing and Commercialization.

Determining the effectiveness of management in natural protected areas has been a challenge that managers and researchers have been facing over the past thirty years. The methodologies that have been reviewed in the framework of this research project have shown that although the determination of management effectiveness undoubtedly has a degree of subjectivity, the development of in-depth interviews with key people, discussion workshops with specialists, review of plans and reports, and field reconnaissance help to reduce this subjectivity. In order to implement the methodology proposed in this study, full access is required to the secondary information available in the area headquarters, as well as the availability of a solid directory of specialists willing to be consulted.

CONCLUSIONS

- The methodologies developed by a variety of institutions and researchers since the beginning of this century to evaluate the effectiveness of protected natural area management can be used as a reference to develop evaluation methods for any particular element in the areas; and in this case for tourism.
- The assignment of four scoring levels (0, 1, 2, 3) to show the degree of progress of each of the variables helps to visualize in a simple way what has been achieved per criterion determined for the evaluation.
- Tourism in the SHBP should be a complementary activity at the service of the conservation of the natural and cultural heritage it harbors, including the active participation of the local population that preserves its relationship with the environment and its traditional economy.
- The search for tourist satisfaction is fundamental to guarantee a constant flow of visitors throughout the year. The SHBP has good potential for the development of various forms of tourism, but considerable efforts need to be made by all actors in order for its potential to be converted into tangible results.
- Priority needs to be given to putting the greatest effort into the work of guaranteeing a good visitor experience.
- Some criteria within the evaluation matrix for tourism management in the SHBP show significant progress, while they are not totally satisfactory. However, the issues of Cultural Identity and Authenticity, as well as Inclusion and Equity, and Marketing and Commercialization, still need to be improved.
- The criteria that obtained the highest scores were Governance, Conservation, and Visitor Experience.

REFERENCES

BORRINI-FEYERABEND, G.; HILL, R. Governance for the conservation of nature. In: Worboys, G.L.; Lockwood, M.; Kothari, A.; Feary, S.; Pulsford, I. (eds) **Protected Area Governance and Management**, pp. 169–206, ANU Press, Canberra, 2015.

BRENNER, L.; SAN GERMAN, S. Gobernanza local para el "ecoturismo" en la Reserva de la Biosfera Mariposa Monarca, México. **Alteridades** vol.22 no. 44 México, Jul./Dec. 2012.

CAAMAÑO, I. La comercialización del turismo industrial. **ROTUR/Revista de ocio y turismo**. Coruña 2011 – No. 4 – p.161-180.

CIFUENTES, M., A. IZURIETA, H. DE FARIA. Medición de la efectividad del manejo de áreas protegidas. Turrialba, CC.R.: WWF:IUCN: GTZ, 2000. 105 p

COOK, C.; HOCKINGS, M. Opportunities for improving the rigor of management effectiveness evaluations in protected areas. **Conservation letters**, n. 4, p. 372-382, 2011.

CONFERENCIA MUNDIAL DE TURISMO SOSTENIBLE. **Carta del turismo sostenible**. Lanzarote, Islas Canarias, España, 1995, 8 p. Disponible en: http://www.datosdelanzarote.com/uploads/doc/20051226123220895CartaTurismoLanzarote.pdf. Access: April 18, 2020.

CONSERVATION MEASURES PARTNERSHIP. **Open Standards for the Practice of Conservation. Version 4.0 2020.** Disponible en https://conservationstandards.org/wp-content/uploads/sites/3/2020/10/CMP-Open-Standards-for-the-Practice-of-Conservation-v4.0.pdf

ELERA, C. El quehacer institucional del Museo Nacional de Sicán en la cuenca de La Leche, Lambayeque. **Quingnam** 3, 35-60, 2017.

ENCUENTRO INTERNACIONAL SOBRE TURISMO JUSTO. **Carta de Málaga sobre el turismo justo. Málaga**, s/p, 2006. Disponible en: <http://www.upv.es/contenidos/CAMUNISO/info/U0579246.pdf>. Access: January 14, 2019.

ERVIN, J., 2003. **Rapid Assessment and Prioritization of Protected Area Management (RAPPAM): Methodology**. WWF, Gland, Switzerland, 52 p.

GELDMANN, J.; COAD, L.; BARNES, M.; CRAIGIE, I. D.; HOCKINGS, M.; KNIGHTS, K.; LEVERINGTON, F.; CUADROS, I.; ZAMORA, C.; WOODLEY, S.; BURGESS, N. Changes in protected area management effectiveness over time: a global analysis. **Biological Conservation**, no. 191, p. 692 – 699, 2015.

GONZÁLES MANTILLA, P.; NERI, L. El ecoturismo como alternativa sostenible para proteger el bosque seco tropical peruano: el caso de Proyecto Hualtaco, Tumbes. **PASOS Revista de Turismo y Patrimonio Cultural,** v. 13, n. 6, p. 1437 - 1449, 2015.

HUARACA, L., PALADINES, G., SUÁREZ, J. Gestión del turismo comunitario como alternativa de desarrollo local. Comunidad Yunguilla. Quito. **Revista Publicando**, 4 No 11. (2):427-441. 2017.

INTERNATIONAL CONFERENCE ON RESPONSIBLE TOURISM IN DESTINATIONS. **The Cape Town Declaration.** Cape Town, 2002. S/P.

JAGER, E.; HALPENNY, E.A. Supporting the CBD Aichi Biodiversity Conservation Targets through Park Tourism: a case study of Parks Canada´s visitor experience program". **Parks** 18(2):78-91. 2012.

LEUNG, Y-F.; SPENCELEY, A.; HVENEGAARD, G.; BUCKLEY, R. (Ed.). **Tourism and visitor management in protected areas: guidelines for sustainability. Best practice protected area guidelines**. Gland, Switzerland: IUCN, 2018. 120 p. (Series n. 27).

MAYORQUÍN, A.; VALENZUELA, S.; RANGEL, J.O. Evaluación de la efectividad de manejo en reservas naturales de la sociedad civil: una propuesta metodológica. **Caldasia** 32(2):381-397. 2010.

MINISTERIO DEL AMBIENTE DEL ECUADOR. **Evaluación de efectividad de manejo del patrimonio de áreas naturales del estado. Guía metodológica**. Quito, 2014. 85 p.

ORGANIZACIÓN MUNDIAL DEL TURISMO (OMT). **Código ético mundial para el turismo**. Resolución de la Asamblea General de la OMT en Santiago, adoptado por la resolución A/RES/406 (XIII) de la decimotercera Asamblea General de la OMT (Santiago de Chile), 27 de diciembre - 1 de octubre de 1999, Madrid, 8 p. Disponible en: <http://www.ugto.mx/images/eventos/06-07-16/codigo-etico-mundial-turismo.pdf>. Access: January 28, 2019.

ORGANIZACIÓN MUNDIAL DEL TURISMO; SULTANATO DE OMÁN; ORGANIZACIÓN DE LAS NACIONES UNIDAS PARA LA EDUCACIÓN, CIENCIA Y LA CULTURA UNESCO. **Muscat Declaration on Tourism and Culture: fostering sustainable development.** Second UNWTO/UNESCO World Conference on Tourism and Culture: fostering sustainable development. Muscat, 2017. 4 p.

PROGRAMA DE LAS NACIONES UNIDAS PARA EL MEDIO AMBIENTE; ORGANIZACIÓN MUNDIAL DEL TURISMO. **Declaración de Quebec sobre el Ecoturismo.** Cumbre Mundial del Ecoturismo, celebrada en la Ciudad de Quebec (Canadá) entre el 19 y el 22 de mayo de 2002. 9 p. Disponible en: <http://www.turismoycooperacion.org/OBSERTUR/X/03.pdf>. Access: January 14, 2019.

SERVICIO NACIONAL DE AREAS NATURALES PROTEGIDAS DEL PERÚ (SERNANP). **Plan Maestro Santuario Histórico Bosque de Pómac 2017-2021**. Lima, 2018. 71 p.

UNIÓN INTERNACIONAL PARA LA CONSERVACIÓN DE LA NATURALEZA (UICN). **Equidad social**. Portal sobre conservación y equidad social de la UICN. 2019. Disponible en: <https://www.portalces.org/biblioteca>. Access: February 12, 2019.

UNESCO. **¿Qué es el patrimonio cultural inmaterial?** 2011. Disponible en: <https://ich.unesco.org/es/que-es-el-patrimonio-inmaterial-00003>. Access: March 11, 2019.

WORLD WILDLIFE FUND. **Avaliação da gestão das unidades de conservação: métodos RAPPAM (2015) e SAMGE (2016).** Brasilia. 2017. 128 p.