Nature-Based Recreational Experiences at Coastal Wetlands: An Application of Importance-Performance Analysis at Bundala National Park Sri Lanka

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Abstract

With the rising demand for nature-based tourism in coastal environments in biodiversity rich tropical countries such as Sri Lanka, an understanding on visitor perceptions on nature-based tourism performance is vital to ensure sustainable destination development. Bundala National Park (BNP) is one of the famous tourist destinations which attracts both local and foreign wildlife tourists. However, given the diverse biodiversity features, the wildlife tourism operations at BNP has the potential for sustainable growth. An understanding of the visitor perceptions on current performance of the destination, and visitor expectations is essential in making informed decisions to bridge the performance-expectation gap and develop strategies for sustainable wildlife tourism development based on coastal wetlands in BNP. This study used the Importance-Performance Analysis aided by a self-reporting structured questionnaire to understand visitor motivation, onsite activities and perceptions on the tourism experience. Respondents rated 'to be in a natural setting' as their main motivation for visiting this destination (79.6%), followed by 'to observe ecological landscape' (60.8%), and 'to learn more about new things/ nature' (45.3%). Viewing wildlife (92.8%), enjoying safari rides (88.4%), and bird watching (82.9%) were the most popular activities among visitors. Gap Analysis IPA identified significant negative gaps in attributes such as 'cost of the safari tour', 'feeling safe on the safari ride', 'guide's knowledge about the park and flora and fauna' as well as 'behaviour of other visitors at the park', where the performance was below visitor expectations (i.e. Performance < Importance). Overall result of the study highlights the importance of management/regulation of recreational activities and maintaining the quality of natural environment, to enhance the visitor experience and satisfaction. Management implications and recommendations are further discussed.

Keywords: coastal tourism, importance, satisfaction, motivations, visitor perception, wildlife

1. Introduction

Provision of recreational opportunities is an important ecosystem service offered by natural landscapes as people derive recreational benefits from experiencing and admiring the beauty, tranquility and aesthetic of nature (Keniger et al., 2013; Simpson and Newsome, 2017). Nature-based recreation and tourism has experienced a significant growth worldwide during the last few decades (Buckley, 2004; Worboys and Gadek, 2004; Holden, 2016) as people increasingly find visiting nature-based destinations as a way of "escaping and relaxation" (Lee et al., 2004; Yoon and Uysal, 2005; Jensen, 2007; Ryu and Um, 2009). The literature suggest that people visit nature-based destinations for variety of purposes with the travel motive varying from pure enjoyment to having a meaningful learning experience with nature (Kerstetter et al., 2004; Perera et al., 2012). The type of leisure experience sought and the "pull" motives

are often identified as key determinants of destination selection for recreational activities (Bushell and Griffin, 2006; Perera and Vlosky 2013). Hence, an understanding of visitors' needs, expectations, attitudes and motivations is highly important from destination managers' perspective to enhance the quality of the recreational experience as well as to remain competitive in the nature-based tourism market (McCool, 2002; Wardell and Moore, 2005).

Visitor satisfaction plays a vital role in development and long-term sustainability of the tourism business (Perera and Vlosky, 2013; Prakash et al., 2019). Visitor satisfaction is described as a result of the comparison between the experience at the destination and the expectations about the destination (Pizam et al., 1978). Satisfaction or quality of experience is a psychological outcome which is generated by visiting a particular setting/ destination (Baker and Crompton, 2000; Howat and Crilley, 2007; Žabkar et al., 2010). Satisfaction leads to destination loyalty of nature-based tourists (del Bosque and San Martin, 2008; Wang et al., 2009; Rivera and Croes 2010), destination choice (Tian-Cole and Crompton, 2003; Kozak and Rimmington, 2000) and future beheviour (Cole et al., 2002; Cole and Scott, 2004; Yoon and Uysal, 2005; Lee, 2007, 2009; Lee et al., 2007). Thus, a tourist who is satisfied with the tourism experience, tends revisit or recommends the destination to others (Oppermann, 2000; Rittichainuwat et al., 2002; Tian-Cole et al., 2002; Gupta et al., 2007; Jang and Feng, 2007; He and Song, 2009; Wu and Liang, 2009). Repeat visitation offers potential for a more stable revenue base (Swanson and Hsu, 2009; Žabkar et al., 2010).

Visitor surveys are among the most commonly used tools to obtain detailed information about the characteristics, preferences, expectations and experience of the visitors to a particular destination. Outcomes of such surveys have wide implications in tourism planning, management, resource allocation, interpretation and marketing (Baker and Crompton, 2000; Tarrant and Smith, 2002; Wardell and Moore, 2005; Bushell and Griffin, 2006). Importance-Performance Analysis (IPA) developed by Martilla and James (1977) is one of the popular techniques which utilises visitor surveys to examine customer satisfaction and management strategies at tourism destinations. It is based on the mean performance and mean importance obtained from surveyed respondents for each of several attributes or characteristics of a service or product. This technique is widely accepted because of its ease of application and ability to present strategic recommendations together with data (Oh, 2001). IPA has gained popularity in fields of research such as travel and tourism (Tonge and Moore, 2007; Wade and Eagles, 2010; Newsome et al., 2019), leisure and recreation (Hollenhorst et al., 1992; Hudson and Shephard, 1998; Tarrant and Smith, 2002; Daniels and Marion, 2006; Marasinghe et al., 2021). This technique is extensively used to understand visitor satisfaction and expectations (i.e., Wade and Eagles, 2003; Eskidsen and Kristensen, 2006; Deng, 2007; Taplin, 2012; Azzopardi and Nash, 2013; Lai and Hitchcock, 2015; Zhang and Chan, 2016; Birendra et al., 2018; Frleta and Jurdana, 2018; Soldić Frleta, 2018; Rose and Basri, 2019; Marasinghe et al., 2021).

Understanding visitor characteristics, behaviors, perceptions, preferences and satisfaction are essential in the development and delivery of quality nature-based tourism experiences in the context of rapidly growing nature-based tourism in Sri Lanka (Perera et al., 2012; Perera and Vlosky, 2013; Senevirathna and Perera, 2013; Perera et al., 2015; Rathnayake, 2015). However, limited studies thus far have attempted to understand the visitor perception on management of recreational activities and natural environment, expectations and satisfaction of nature-based tourists visiting coastal wetland destinations in the country (Marasinghe et al., 2021). Moreover, some studies suggested that, majority of visitors to National Parks in Sri Lanka, is dissatisfied with the park management and tour operational activities (Prakash et al., 2019). However, there are no recent studies carried out to evaluate the quality of visitor experience at BNP, a well-known destination for birdwatching and wildlife tourism. Hence, this study aimed to examine the visitors' level of satisfaction regarding the safari wildlife tourism experience at

Bundala National Park and to identify their attitudes, motivation and knowledge on environmental concepts in order to shape management actions to improve the quality of recreational experience while conserving the natural ecosystem. This study thus makes a significant contribution towards expanding the limited literature on visitor studies on nature-based tourism in coastal birding destinations of Sri Lanka.

2. Materials and Methods
2.1. Study site

Bundala National Park (BNP) and the sanctuary spans over 6,216ha, and lies on the coast of Hambantota District in Southern Province (Figure 1). It is of international significance for migrating birds and declared as a Ramsar wetland in October 1990. BNP is managed by the Department of Wildlife Conservation with the main scope of biodiversity conservation while allowing the responsible recreational and educational opportunities for visitors (DWC, 2008). Three topographic zones can be identified in wetland-dominated BNP; (1) beach and sand dunes, (2) outer coastal plains with lagoons and (3) inner coastal plains. Mean annual rainfall in BNP ranges from 900 mm to 1,300 mm, with two peaks periods of rainfall in April–May and October-November, and an extensive intervening dry period between May and September. It has a diverse vegetation, showing a natural succession from low, creeping plants that have colonised the beach and sand dunes to climax forest as Thorn, Dry Semi-Evergreen and Dry-Mixed Evergreen. Additionally salt marshes, mangrove and aquatic vegetation can be identified in the lagoons and low lying areas (Bambaradeniya et al., 2002).
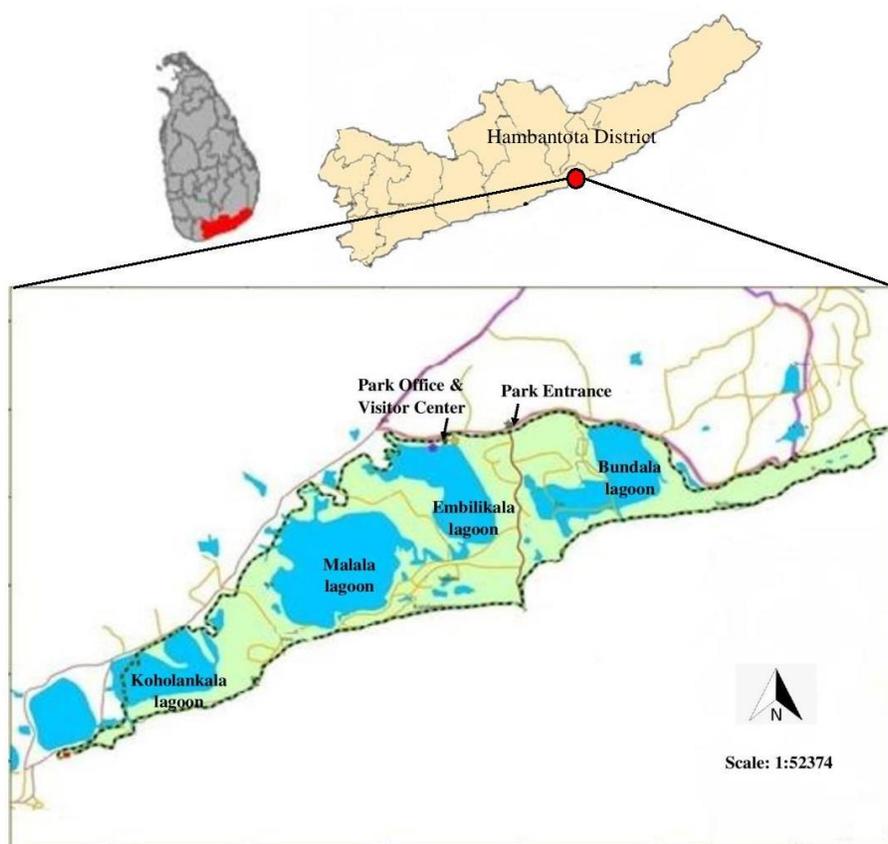

Figure 1. Location map of Bundala National Park.

With a staggering 165 recorded bird species, the BNP is regarded as one of the premier bird watching destinations in Sri Lanka. Out of the total bird species recorded, approximately 27 % is migratory

birds while 0.01% is endemic to the country (DWC, 2008). Large flocks of migrating Greater Flamingos (*Phoenicopterus roseus*) is one of the key biodiversity features of the BNP, which attracts thousands of local and foreign birders each year. For instance, the total number of visitors to the BNP was 18,629 in 2019 where foreign visitors accounted for 46% of total visitors (SLTDA 2020). Visitations to the park is typical done in four-wheel drive jeeps operated by safari jeep owners/services or private vehicles. A guide employed by the Department of Wildlife Conservation join each tour group/jeep at the gates for both safety and nature interpretation purposes, in line with the visitor policy of the park.

2.2. Development of research instrument

A structured questionnaire was used as the primary research instrument to gather information on visitor demographics, trip characteristics, visitor motivations, intended behaviors, and their level of satisfaction and importance of specific attributes pertaining to a wetland tourism experience. Closed-ended questions were used to explore visitor motivations, the importance and satisfaction with their experience. The responses were measured on a 5-point Likert scale from 1 (not at all important) to 5 (extremely important). Open- ended questions were included to the questionnaire to gain the extended ideas and views of visitors on wildlife tourism management at Bundala National Park. The 18 attributes were selected for the IPA, after a thorough review of the literature (Deng, 2007; McGuiness et al., 2017; Newsome et al, 2019; Vaske et al., 2009; Zhang and Chan, 2016) and modified according to the study site context. The questionnaire was pre-tested using a sample of 25 visitors and further revised before it was administered at the site.

2.3. Sampling and data collection

Data collection was conducted from November 2017 to April 2018 and November 2018 to March 2019 (tourist season), predominantly on weekends where higher visitor numbers were anticipated. The self-report questionnaire was administered to visitors arriving at the park. Two field workers were employed to distribute the questionnaires and visitors were provided with the questionnaire prior to starting their safari ride, while at the waiting area of the visitor center at the park office. All members of each visitor group entering the sampling location were informed about the survey and asked about their willingness to participate. Only one member from each visitor group, who was over 18 years of age, and who volunteered themselves to participate were provided with a questionnaire. Those who declined to participate in the survey and unreturned questionnaires were considered as non-respondents. A total of 300 questionnaires were administered over the study period.

2.4. Data analysis

Data were cleaned by performing a consistency check before proceeding to detailed analysis. Incomplete questionnaires with many missing responses were discarded. Data were statistically analysed using IBM® SPSS® Statistics 20 software and descriptive analysis (i.e. mean, percentages and comparisons) was carried out using Microsoft Excel. Data set was tested for validity by using Exploratory Factor Analysis (Kaiser-Meyer-Oklin measure of sampling adequacy=0.870) and for reliability by using Cronbach's Alpha Reliability Test (Cronbach's Alpha=0.812). Importance-performance analysis (IPA) technique (Martilla and James, 1977) was used to evaluate 18 selected attributes related to recreational experience of visitors to Bundala National Park. IPA matrix consists of four quadrants (see Figures 4 and 5) as follows: Quadrant (I)–high importance and high performance (Keep Up Good Work); Quadrant (II)–low importance and high performance (Possible Overkill); Quadrant (III)–low importance and low performance (Low priority); and Quadrant (IV)–high importance and low performance (Concentrate Here). Gap Analysis IPA is a further development of this IPA technique, which quantitatively assesses the significance of the differences between visitor expectations (Importance) and the Performance of an attribute via a one-sample *t*-Test (Taplin, 2012; Simpson at al., 2019). This study utilised the scale-centered

and data-centered IPA along with gap analysis to quantify and visualise visitor satisfaction with their birdwatching safari jeep ride experience at BNP (McGuiness et al., 2017; Parker and Simpson, 2018; Simpson et al. 2019). Results from the gap analysis were graphed on a hybrid Data-centered and Gap Analysis IPA matrix to further elaborate the findings (Taplin, 2012; Parker and Simpson 2018; Simpson et al., 2019).

3. Results

Out of the 300 visitors approached at the entrance of the park, a total of 192 individuals participated in the survey, which accounted for a response rate of 64%. There were 181 usable questionnaires with 11 questionnaires discarded as they were incomplete or responses were inconsistent, hence the adjusted response rate was 60.3%. Statistical tables were applied to determine the sample error made in the population and it was 5.7% for a confidence level of 95% (Bigne et al., 2001).

3.1. Visitor profile and trip characteristics

General respondent socio-demographic characteristics are summarised in Table 1. The respondents were dominated by young to middle-age, well- educated, male visitors. Most respondents were between ages 26 and 45 (74.5%). Approximately 81% of the respondents had attained an education level of university/college degree or above. Most respondents (91.2%) were first time visitors to BNP. The majority (92.9%) of the visitor groups represented in the sample were specifically visiting the destination for a wildlife tourism experience. However, 97.2% of the respondents had undertaken wildlife tourism experience elsewhere. For 91% of respondents, BNP was one of several destinations of their trip and for 9% respondents it was not a planned destination of their trip (Table 1).

Table 1: General respondent socio-demographic profile and trip characteristics (N=181).

Visitor characteristics	Percentage (%)	Visit characteristics	Percentage (%)
Age group		*Trip planning*	
18-25 years	3.0	Main destination of trip	0.0
26-35 years	29.0	One of several on trip	91.0
36-45 years	45.6	Not a planned destination	9.0
46 or older	22.4		
		First visit to BNP	
Gender		Yes	91.2
Male	62.0	No	8.8
Female	38.0		
		Trip specifically for wildlife tourism	
Highest education level attained			
Primary	---	Yes	92.9
High school	18.9	No	7.1
University/college	74.0	*Previously undertaken wildlife tour*	
Postgraduate	7.1	Yes	97.2
		No	2.8
		Monthly income	
		Less than 200 USD	14.5
		200-500 USD	8.1
		500-1,000 USD	1.1
		1,000-2,000 USD	38.7
		More than 2,000 USD	37.6

3.2. Visitor motives and desired activities

Visitors were asked to indicate their main motivations for visiting the BNP. Approximately 79.6% of respondents cited "to be in a natural setting" as their motivation for visiting BNP followed by "to observe ecological landscapes" (60.8%) and "to learn more about new things/ nature" (45.3%) (Figure 2). As indicated in Figure 3, "viewing wildlife" (92.8%) was the top-ranked activity undertaken by visitors, followed by enjoying safari rides (88.4%) and bird watching (82.9%).
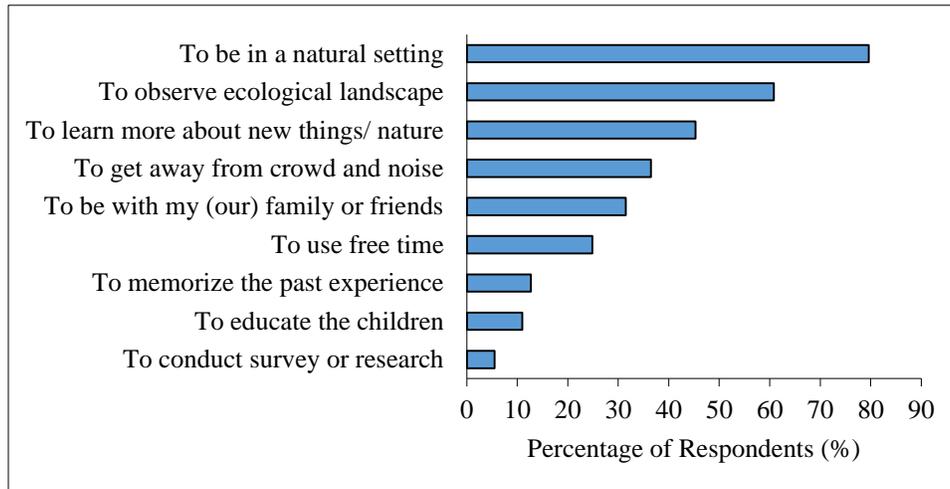

Figure 2. Motivations of respondents for visiting Bundala National Park
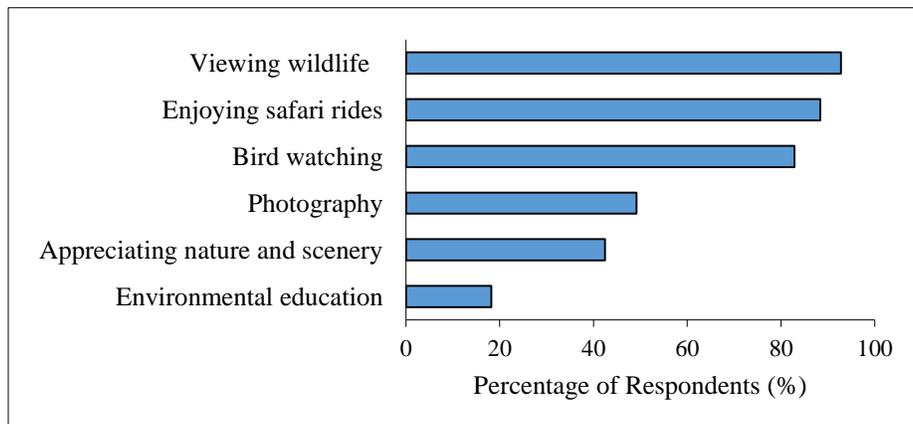(N=181 with multiple responses possible).

Figure 3. Activities undertaken by the respondents at Bundala National Park
(N=181 with multiple responses possible).

3.3. Overall visitor satisfaction

The results of the scale-centered IPA in general suggest that the destination is performing well with all 16 attributes placed in "Keep Up Good Work" quadrant (Figure 4). This shows that visitors placed high importance on all 18 attributes and of the performance of those attributes was meeting or exceeding visitor expectations. This is further reflected in all of respondents rating their overall satisfaction on the positive side of Likert scale (mean score = 4.57) and strong levels of support for personal recommendation (mean score=4.65) and revisit intention (92.9%) for Bundala National Park (Table 2).
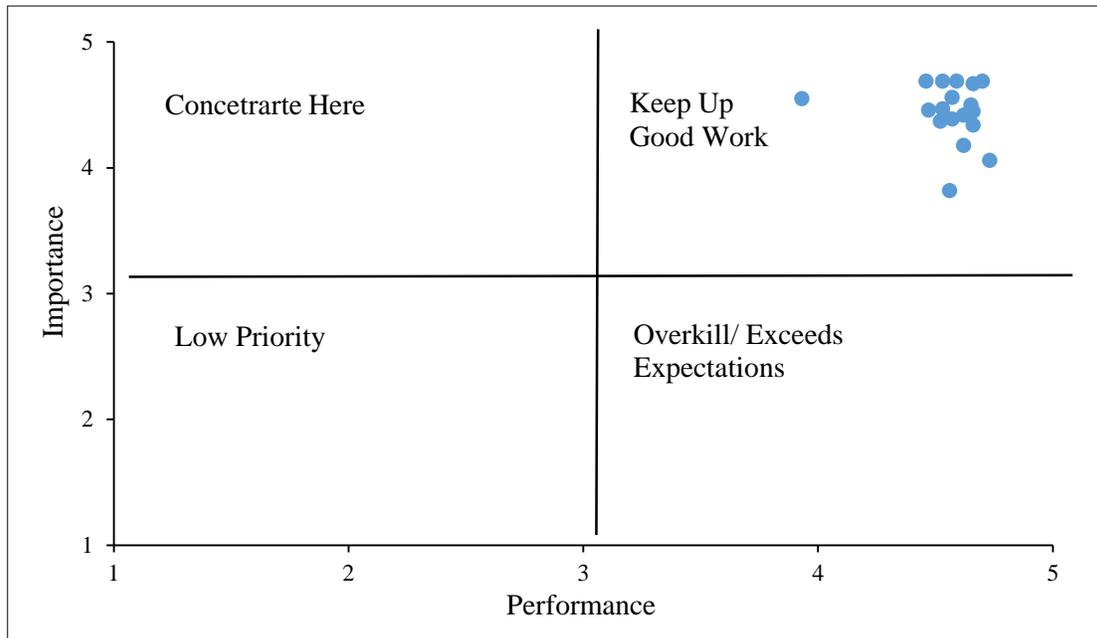
Figure 4. Scale-cantered IPA (Martilla and James, 1977) for nature-based tourism focused safari rides at Bundala National Park.

Table 2: Overall level of satisfaction, personal recommendation, and revisit intention reported by respondents (N=181).

	Mean/Percentage
Overall, how satisfied are you with your visit to Bundala National Park?	4.57 (5-point Likert scale)
This visit offered a good value for the money spent	4.18 (5-point Likert scale)
How strongly would you recommend this experience to friends who share your interests?	4.65 (5-point Likert scale)
Would you come back and visit Bundala National Park again?	Yes = 92.9% No = 7.1%

The results of the enhanced IPA and gap analysis for all 18 attributes are reported in Table 3 and the data-cantered and Gap Analysis IPA matrix is presented in Figure 5.

Table 3: Mean levels of Importance (I) and Performance (P) and the resulting Gap (P–I) with attributes ordered from largest negative to largest positive gap in performance.

Code	Attribute	N	I	P	Gap	t-statistic	p-value
1	Ability to have a once in a lifetime wildlife experience	181	3.82	4.56	0.74	3.764	0.014*
2	Abundance of wildlife	181	4.34	4.66	0.32	4.101	0.002*
3	Proximity to wildlife	181	4.45	4.66	0.21	5.082	0.004*
4	Proximity to birds	181	4.42	4.62	0.20	5.080	0.000*
5	Number of animals seen	181	4.39	4.57	0.18	5.522	0.000*
6	Waiting time for ticketing procedures at the park gates	181	4.18	4.62	0.44	5.421	0.000*

| Code	Attribute	N	I	P	Gap	t-statistic	p-value
7	Number of passengers in the safari vehicle	181	4.06	4.73	0.67	3.620	0.007*
8	Number of other safari vehicles/visitor traffic inside the park	181	4.47	4.53	0.06	3.654	0.016*
9	Duration of the safari tour	179	4.56	4.57	0.01	3.278	0.039*
10	Cost of the safari tour	170	4.55	3.93	-0.62	3.448	0.010*
11	Interesting and informative guided tour	176	4.69	4.70	0.01	5.020	0.000*
12	Feeling safe on the guided tour	181	4.69	4.53	-0.16	4.790	0.000*
13	Clear information about visitor safety	181	4.50	4.65	0.15	5.673	0.000*
14	Useful information on flora and fauna	181	4.37	4.52	0.15	5.702	0.000*
15	Guide's knowledge of the about park and flora and fauna	181	4.69	4.59	-0.10	6.400	0.000*
16	Overall cleanliness of the park	181	4.67	4.66	-0.01	4.887	0.000*
17	Quality of the nature trails inside the park	181	4.46	4.47	0.01	3.424	0.025*
18	Other visitors generally well behaved	156	4.69	4.46	-0.23	5.321	0.000*
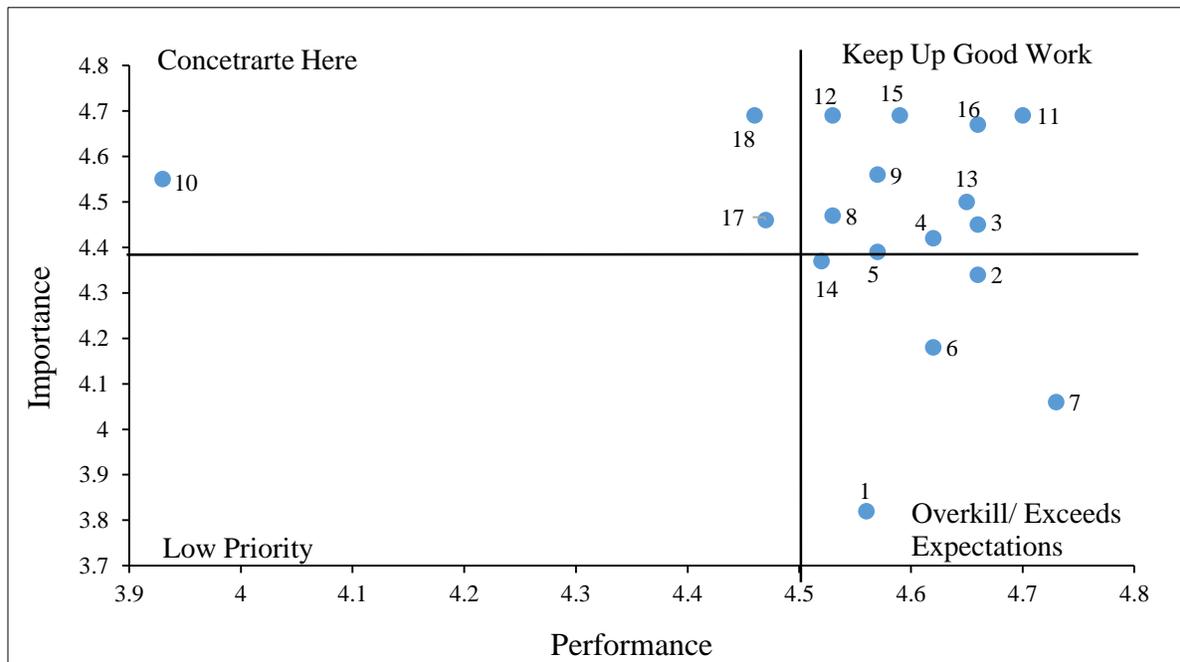
Figure 5. IPA matrix for the attributes of the birding/wildlife safari jeep tours at Bundala National Park reported in Table 3. Cross-hairs are place at the mean values for the Importance and Performance of the attributes.

3.4. Visitor satisfaction with wildlife safari operation

The results of data-cantered IPA matrix (Figure 5) suggest that attributes associated with the operation of the safari jeep rides are performing well. "Duration of the safari tour" (9), "feeling safe on the guided tour" (12), "clear information about visitor safety" (13), are located in Quadrant I (Keep Up Good Work). However, "cost of the safari tour" (10) is in Quadrant IV (Concentrate Here) thus, warrant some corrective management action. "Number of animals seen" (5) and "waiting time for ticketing procedures at the park gates" (6), are located in Quadrant II (Possible Overkill), and those attributes appear to have exceed visitor expectations, with the significant over-performance (i.e. Performance > Importance). Those findings were in line with the responses of visitors for the questions which were specifically asked about overall satisfaction about the safari ride operations. Most respondents (98.9%) rated the safari jeep driver's behaviour and compliance with safety and operation rules as being acceptable or excellent and approximately 94.5% stated that the speed of the safari jeep was acceptable or "about right".

However, as revealed by the data-centred and Gap Analysis IPA matrix, "feeling safe on the guided tour" (12) and "cost of the safari tour" (10) have significant negative performance gaps (i.e. Importance > Performance) and the "cost" is the worst performed attribute among all 18 attributes considered for the study. The results are contradictory for Attribute 12 and Attribute 13. Although the visitors were satisfied with clear information provided on safety, the majority of the respondents couldn't meet expected level of feeling of their safety during the tour.

3.5. Visitor satisfaction with the nature-based attributes

According to data-centred IPA matrix (Figure 5), nature-based attributes associated with safari rides such as, "proximity to wildlife" (3) and "proximity to birds" (4) appear in the optimal Quadrant I (Keep Up Good Work), while "ability to have a once in a lifetime wildlife experience" (1) and "abundance of wildlife" (2) have exceed visitor expectations, with the significant over-performance (i.e. Performance > Importance) of that attribute locating it in Quadrant II.

3.6. Visitor satisfaction with the information/interpretation provided

"Interesting and informative guided tours" (11) and "guide's knowledge about park and flora and fauna' (15) were located in Quadrant I (Keep Up Good Work). But according to data-cantered Gap Analysis IPA matrix, a significant negative performance gap (i.e. Importance > Performance) was recorded for the attribute "guide's knowledge about the park and flora and fauna" (15), despite being located in the Keep Up Good Work Quadrant. However, the attribute "useful information on flora and fauna" (14) appears in the Quadrant II, where performance exceeds visitor expectations.

3.7. Visitor satisfaction with the operating/destination environment

When considering the visitors' perception on the destination management, "quality of the nature trails inside the park" (17) and "other visitors generally well behaved" (18) are located in the Quadrant IV (Concentrate Here), thus which should be considered when setting priorities for corrective management action. "Number of other safari vehicles/visitor traffic inside the park" (8) and "overall cleanliness of the park" (16) are located in Quadrant I (Keep Up Good Work). But interestingly, though, "overall cleanliness of the park" (16) appears in the Keep Up Good Work Quadrant, a significant negative performance gap (i.e. Importance > Performance) was recorded for that attribute. Therefore attention of park management should be paid to maintain the cleanliness inside the park. Moreover, "number of passengers in the safari vehicle" (7) has exceeded visitor expectations, with the significant over-performance (i.e. Performance > Importance). Further, when specifically asked about the level of safari jeep traffic observed during their tour, 85% of the respondents stated that the level of traffic was "just about right" and only 3.3% reported that there were "too many" safari jeeps for their liking. Those finding agree with the outcome of the IPA that visitors were satisfied with the "number of other safari vehicles/visitor traffic inside the park" (8).

Furthermore, another question was asked from visitors about what they think is the optimum number of jeeps they would like to see inside the park and how many jeeps they observed during their safari ride. Approximately 54.2% of respondents stated that they would have preferred to see five or less number of jeeps on their ride while another 30.9% respondents preferred to see three or less number of safari jeeps (Figure 6). The majority of respondents (40.9%) reported seeing less than five jeeps, during their ride.
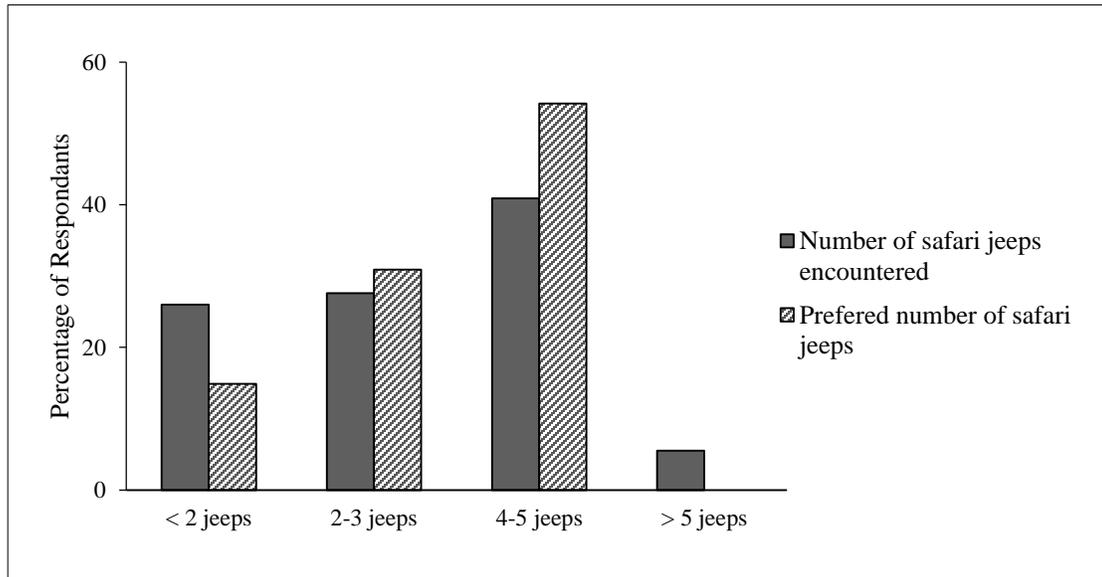

Figure 6. Number of jeeps encountered by the respondents during their safari ride at Bundala National Park and their perceived optimum number of jeeps (N=181).

3.8. Overall perceptions of nature-based tourism management

Respondents were asked to rank their responses to the three questions reported in Table 4 using a 5-point Likert scale anchored by 1=highly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree and 5=highly agree. The tight clustering of the results (narrow 95% confidence interval) about the mean values aligned to the rating of "agree".

Table 4: Visitor perceptions on management of nature-based tourism at Bundala National Park (N=181).

Statement	Mean	±95%CI
Sufficient actions are taken to protect the park	4.28	0.10
Sufficient actions are taken to protect the wild life inside the park	4.36	
Safari jeep rides are well regulated and managed	4.40	0.09
Birds and other wildlife in the park are disturbed by the visitors	3.65	
Wildlife tourism in the Bundala park is a good example of environmentally responsible travel	4.44	0.10

4. Discussion

4.1 Visitor satisfaction

The outcome of the IPA-based survey revealed several important trends on wildlife and birding tour operations at the BNP. Even though, wildlife and birding safari jeep rides are providing a "once in a lifetime wildlife tourism experience" to visitors exceeding their expectations, several aspects of the experience are falling short of visitor expectations which can result in negative impacts on destination

image and loyalty. As revealed by the visitors' responses, "cost of the safari ride" is the top priority for corrective management action at BNP since it was the least performed attribute which had the highest negative performance gap. Credibility concerns can be raised especially among foreign visitors, because of the present discrepancy in prices of safari rides and two-tiered pricing adopted by private safari vehicle owners at the destination, and this can result in visitor dissatisfaction (Laarman and Gregersen, 1996; Walpole et al., 2001). Hence, safari ride operations should be standardised by encouraging the service providers to clearly communicate the tour package details via printed, verbal and online means, thus the visitors will be well-informed about the tour before making the purchasing decisions. Moreover, aspects such as quality of the nature trails and behaviour of the visitors also should be taken in to the consideration to enhance the visitor experience.

According to IPA results, "proximity to wildlife" and "proximity to birds" were positioned in the optimal quadrant with significant positive performance gaps. Though it is plus point when considering about the visitor satisfaction, safari vehicles getting in close proximity to wildlife, especially birds, can have negative impacts on their general behaviour (Schlacher et al., 2013; Burger and Niles, 2013; Martín et al., 2015; Marasinghe et al., 2020). Hence, it is necessary to minimise disturbance on avifauna and their habitats, through introducing appropriate guidelines for safari ride operations, by considering the flight response distances of birds and speed limits of the safari vehicles (Velando and Munila, 2011; Burger and Niles, 2013; Le Corre et al., 2013).

Furthermore, nature interpretation has been recognised as an important component in sustainable nature-based tourism development (Hwang et al., 2005; Ham and Weiler, 2012; Wang, 2015; Zhang and Chan, 2016; Mutanga et al., 2017). The significant negative performance gap recorded for "guide's knowledge about the park and flora and fauna" indicates the need for more organized and well-planned out mechanism for nature interpretation in the park. The management can introduce professional training for safari ride operators, safari jeep riders and guides to ensure ethical, legal environmentally responsible, safe and educative tour experiences (Prakash et al., 2019), which ultimately leads to enhanced levels of visitor satisfaction.

4.2 Perception of visitors on recreational management

A number of attributes under the direct control of the park management (i.e., "waiting time for ticketing procedures at the park gates", "number of passengers in the safari vehicle", "number of other safari vehicles/visitor traffic inside the park", "interesting and informative guided tour" and "clear information about visitor safety") recorded significant positive performance gaps (Importance < Performance). These outcomes are in line with the survey finding of which, the majority of the visitors were satisfied with the nature-based tourism experience provided at the destination (measured using a single item/statement in the questionnaire).

Though the visitors to BNP were satisfied with the clear information provided on the safety, the results suggest that safety attributes fell below the visitor expectations. The negative gap between the expectations of visitors' personal safety and underperformance, may be due to the speed and condition of some safari jeeps and the 'reckless' driving of some drivers. On the other hand, the results revealed that, the personal safety of visitors is one of the major and sensitive aspects, which should be fulfilled to meet the visitor satisfaction. Hence, an overall improvement on actions on passenger safety and safety instructions during the tour should be considered as a priority. "Overall cleanliness of the park" also couldn't meet the visitors' expected level of performance, indicating the need for closer attention and management actions to maintain the natural environment of BNP clean.

4.3 Visitors' knowledge on environmental concepts

Attributes such as, "ability to have a once in a lifetime wildlife experience", "abundance of wildlife", "number of animals seen" and "useful information on flora and fauna" achieving the visitor satisfaction by exceeding their expectations (Importance < Performance) possibly hints the less environmentally oriented motives of visitors, in appreciating what the destination has to offer. Hence, the dominant segment of visitors to BNP, can be identified as "picnickers", those who visit nature-based destinations purely for enjoyment, with less desire to have a nature-based learning experience (Perera et al., 2012). This may further explain visitors placing less importance on nature interpretation and learning related attributes.

4.4 Limitations of the study

A personal interview with visitors at the end of the safari tour would have yielded more accurate views of the visitors on current and desired performance of the destination. However, due to the practical difficulty in intercepting visitors at the exit of the park, this study relied on a self-reporting questionnaire. Furthermore, the sampling technique employed in the study did not capture adequate number of non-English speaking foreign visitors as a result of constraints in translating the questionnaires in to different languages. Hence the sample captured in this study represents only a section of the international visitors to Bundala National Park. Only the foreign visitor segment was considered for the analysis due to inadequate sample size of domestic visitors.

5. Conclusion

This study utilised IPA techniques to evaluate visitor perceptions of tourism operations at a coastal wetland tourism destination with the aim of identifying high and low priority/performance attributes. Though the visitors to Bundala National Park, are generally satisfied with their experience, several under-performing attributes were identified (i.e. visitor safety, cost of the safari ride, quality of the nature trails, overall cleanliness of the park and guides' knowledge about flora and fauna). Those visitor concerns need managerial attention to lift visitor satisfaction levels and ensure future destination development within the framework of sustainable tourism. The findings emphasise the importance of the protection of the environment in line with recreation. This study suggests several management implications to improve the quality of the recreational experience as well as the image of the destination such as, introducing effective safety guidelines, improving professional standards and interpretation skills of tour guides and adopting more transparent and appropriate pricing strategies for safari jeep rides.

References

Azzopardi, E. and Nash, R., 2013. A critical evaluation of importance–performance analysis. *Tourism Management*, 35:222-233.

Baker, D.A. and Crompton, J.L., 2000. Quality, satisfaction and behavioral intentions. *Annals of tourism Research*, 27:785-804.

Bambaradeniya, C.N.B., Ekanayake, S.P., Fernando, R.H.S.S., Perera, W.P.N. and Somaweera, R., 2002. A biodiversity status profile of Bundala National Park-A Ramsar wetland in Sri Lanka. *Occasional Paper of IUCN Sri Lanka*.

Bigne, J.E., Sanchez, M.I. and Sanchez, J., 2001. Tourism image, evaluation variables and after purchase behaviour: inter-relationship. *Tourism Management*, 22:607-616.

Birendra, K.C., Paudyal, R. and Neupane, S.S., 2018. Residents' perspectives of a newly developed ecotourism project: an assessment of effectiveness through the lens of an importance–performance analysis. *Asia Pacific Journal of Tourism Research*, 23:560-572.

Buckley, R. 2004. Impacts of ecotourism on birds. *Environmental impacts of ecotourism*, 187-209.

Burger, J. and Niles, L., 2013. Shorebirds and stakeholders: Effects of beach closure and human activities on shorebirds at a New Jersey coastal beach. *Urban Ecosystems*, 16:657-673.

Bushell, R. and Griffin, T., 2006. Monitoring visitor experiences in protected areas. *International Journal of Protected Area Management*, 16:25-33.

Cole, S.T., Crompton, J.L. and Willson, V.L., 2002. An empirical investigation of the relationships between service quality, satisfaction and behavioral intentions among visitors to a wildlife refuge. *Journal of Leisure Research*, 34:1-24.

Cole, S.T. and Scott, D., 2004. Examining the mediating role of experience quality in a model of tourist experiences. *Journal of Travel and Tourism Marketing*, 16:79-90.

Daniels, M.L. and Marion, J.L., 2006. Visitor evaluations of management actions at a highly impacted Appalachian Trail camping area. *Environmental Management*, 38:1006-1019.

del Bosque, I.R. and San Martín, H., 2008. Tourist satisfaction a cognitive-affective model. *Annals of Tourism Research*, 35:551-573.

Deng, W., 2007. Using a revised importance–performance analysis approach: The case of Taiwanese hot springs tourism. *Tourism Management*, 28:1274-1284.

DWC, 2008. Biodiversity Baseline Survey: Bundala National Park. Consultancy Services Report prepared byGreen, M.J.B. (ed.), De Alwis, S.M.D.A.U., Dayawansa, P.N., How, R., Padmalal, U.K.G.K., Singhakumara, B.M.P., Weerakoon, D. and Wijesinghe, M.R. Infotechs IDEAS in association with GREENTECH Consultants. Sri Lanka Protected Areas Management and Wildlife Conservation Project (PAM&WCP/CONSULT/02/BDBS), Department of Wildlife Conservation, Ministry of Environment and Natural Resources, Colombo. Pp. 46.

Eskidsen, J.K. and Kristensen, K., 2006. Enhancing importance performance analysis. *International Journal of Productivity and Performance Management*, 55:40-60.

Frleta, D.S. and Jurdana, D.S., 2018. Seasonal variation in urban tourist satisfaction. *Tourism Review*.

Gupta, S., McLaughlin, E. and Gomez, M., 2007. Guest satisfaction and restaurant performance. *Cornell Hotel and Restaurant Administration Quarterly*, 48:284-298.

Ham, S.H. and Weiler, B., 2012. Interpretation as the centerpiece of sustainable wildlife tourism. *Sustainable Tourism. Butterworth-Heinemann, Oxford*, 35-44.

He, Y. and Song, H., 2009. A mediation model of tourists' repurchase intentions for packaged tour services. *Journal of Travel Research*, 47:317-331.

Holden, A., 2016. *Environment and Tourism*. Routledge, London, United Kingdom.

Hollenhorst, S.J., Olson, D. and Fortney, R., 1992. Use of importance-performance analysis to evaluate state park cabins: the case of the West Virginia state park system. *Journal of Park and Recreation Administration*, 10:1-11.

Howat, G. and Crilley, G., 2007. Customer service quality, satisfaction, and operational performance: A proposed model for Australian public aquatic centres. *Annals of Leisure Research*, 10:168-195.

Hudson, S. and Shephard, G.W., 1998. Measuring service quality at tourist destinations: An application of importance-performance analysis to an alpine ski resort. *Journal of Travel and Tourism Marketing*, 7:61-77.

Hwang, S.N., Lee, C. and Chen, H.J., 2005. The relationship among tourists' involvement, place attachment and interpretation satisfaction in Taiwan's national parks. *Tourism Management*, 26:143-156.

Jang, S.S. and Feng, R., 2007. Temporal destination revisit intention: The effects of novelty seeking and satisfaction. *Tourism management*, 28:580-590.

Jensen, J.M., 2007. An empirical investigation of the relationships between hygiene factors, motivators, satisfaction, and response among visitors to zoos and aquaria. *Tourism Review International*, 11:307-316.

Keniger, L.E., Gaston, K.J., Irvine, K.N. and Fuller, R.A., 2013. What are the benefits of interacting with nature?. *International Journal of Environmental Research and Public Health*, 10:913-935.

Kerstetter, D.L., Hou, J.S. and Lin, C.H., 2004. Profiling Taiwanese ecotourists using a behavioral approach. *Tourism Management*, 25:491-498.

Kozak, M. and Rimmington, M., 2000. Tourist satisfaction with Mallorca, Spain, as an off-season holiday destination. *Journal of Travel Research*, 38:260-269.

Lai, I.K.W. and Hitchcock, M., 2015. Importance–performance analysis in tourism: A framework for researchers. *Tourism Management*, 48:242-267.

Laarman, J.G. and Gregersen, H.M., 1996. Pricing policy in nature-based tourism. *Tourism Management*, 17:247-254.

Le Corre, N., Peuziat, I., Brigand, L., Gélinaud, G. and Meur-Férec, C., 2013. Wintering waterbirds and recreationists in natural areas: a sociological approach to the awareness of bird disturbance. *Environmental Management*, 52:780-791.

Lee, T.H., 2007. Ecotourism behavioral model of national forest recreation areas in Taiwan. *International Forestry Review*, 9:771-785.

Lee, T.H., 2009. A structural model to examine how destination image, attitude, and motivation affect the future behavior of tourists. *Leisure Sciences*, 31:215-236.

Lee, C.K., Lee, Y.K. and Wicks, B.E., 2004. Segmentation of festival motivation by nationality and satisfaction. *Tourism Management*, 25:61-70.

Lee, C.K., Yoon, Y.S. and Lee, S.K., 2007. Investigating the relationships among perceived value, satisfaction, and recommendations: The case of the Korean DMZ. *Tourism Management*, 28:204-214.

Marasinghe, S., Perera, P., Simpson, G.D. and Newsome, D., 2021. Nature-based tourism development in coastal wetlands of Sri Lanka: An Importance–Performance analysis at Maduganga Mangrove Estuary. *Journal of Outdoor Recreation and Tourism*, 33:100345.

Marasinghe, S., Simpson, G., Newsome, D. and Perera, P., 2020. Scoping recreational disturbance of shorebirds to inform the agenda for research and management in Tropical Asia. *Tropical Life Sciences Research*, 31:51-78, 202.

Martilla, J.A. and James, J.C., 1977. Importance-performance analysis. *Journal of Marketing*, 41:77-79.

Martín, B., Delgado, S., De La Cruz, A., Tirado, S. and Ferrer, M., 2015. Effects of human presence on the long-term trends of migrant and resident shorebirds: evidence of local population declines. *Animal Conservation*, 18:73-81.

McCool, S.F., 2002. Tourism in protected areas: continuing challenges and emerging issues for sustaining visitor experiences. *Celebrating Mountains, Jindabyne, Australia*, 26.

McGuiness, V., Rodger, K., Pearce, J., Newsome, D. and Eagles, P.F., 2017. Short-stop visitation in Shark Bay World Heritage Area: an importance–performance analysis. *Journal of Ecotourism*, 16:24-40.

Mutanga, C.N., Vengesayi, S., Chikuta, O., Muboko, N. and Gandiwa, E., 2017. Travel motivation and tourist satisfaction with wildlife tourism experiences in Gonarezhou and Matusadona National Parks, Zimbabwe. *Journal of outdoor recreation and tourism*, 20:1-18.

Newsome, D., Rodger, K., Pearce, J. and Chan, K.L.J., 2019. Visitor satisfaction with a key wildlife tourism destination within the context of a damaged landscape. *Current Issues in Tourism*, 22:729-746.

Oh, H., 2001. Revisiting importance–performance analysis. *Tourism management*, 22:617-627.

Oppermann, M., 2000. Tourism destination loyalty. *Journal of Travel Research*, 39:78-84.

Parker, J. and Simpson, G.D., 2018. Visitor satisfaction with a public green infrastructure and urban nature space in Perth, Western Australia. *Land*, 7:159.

Perera, P., Senevirathna, M.C. and Vlosky, R.P., 2015. Recreationist perspectives, attitudes, and perceptions towards national park management in Sri Lanka. *Turizam: Međunarodni Znanstveno-Stručni Casopis*, 63:497-514.

Perera, P. and Vlosky, R., 2013. How Previous Visits Shape Trip Quality, Perceived Value, Satisfaction, and Future Behavioral Intentions: The Case of Forest-Based Ecotourism in Sri Lanka. *International Journal of Sport Management, Recreation and Tourism*, 11.

Perera, P., Vlosky, R.P. and Wahala, S.B., 2012. Motivational and behavioral profiling of visitors to forest-based recreational destinations in Sri Lanka. *Asia Pacific Journal of Tourism Research*, 17:451-467.

Pizam, A., Neumann, Y. and Reichel, A., 1978. Dimentions of tourist satisfaction with a destination area. *Annals of tourism Research*, 5:314-322.

Prakash, S.L., Perera, P., Newsome, D., Kusuminda, T. and Walker, O., 2019. Reasons for visitor dissatisfaction with wildlife tourism experiences at highly visited national parks in Sri Lanka. *Journal of Outdoor Recreation and Tourism*, 25:102-112.

Rathnayake, R.M.W., 2015. How does 'crowding'affect visitor satisfaction at the Horton Plains National Park in Sri Lanka?. *Tourism Management Perspectives*, 16:129-138.

Rittichainuwat, B.N., Qu, H. and Mongknonvanit, C., 2002. A study of the impact of travel satisfaction on the likelihood of travelers to revisit Thailand. *Journal of Travel and Tourism Marketing*, 12:19-43.

Rivera, M. A. and Croes, R., 2010. Ecotourists' loyalty: will they tell about the destination or will they return?. *Journal of Ecotourism*, 9:85-103.

Rose, R.A.C. and Basri, N.E.A., 2019. Analisis tahap kepuasan pengunjung di taman rekreasi awam Sabah (Analysis of visitor satisfaction levels in Sabah recreational public parks). *Geografia-Malaysian Journal of Society and Space*, 15:336-349.

Ryu, S. and Um, S., 2009. The reexamination of the relationship between tourist satisfaction and revisit intention: The mediating effect of changed attitude. *Journal of Tourism and Leisure Research*, 21:89-104.

Schlacher, T.A., Weston, M.A., Lynn, D. and Connolly, R.M., 2013. Setback distances as a conservation tool in wildlife-human interactions: testing their efficacy for birds affected by vehicles on open-coast sandy beaches. *PloS one*, 8:p.e71200.

Senevirathna, H.M.M.C. and Perera, P.K.P., 2013. Wildlife viewing preferences of visitors to Sri Lanka's national parks: Implications for visitor management and sustainable tourism planning. *Journal of Tropical Forestry and Environment*, 3:1-10.

Simpson, G. and Newsome, D., 2017. Environmental history of an urban wetland: from degraded colonial resource to nature conservation area. *Geo: Geography and Environment*, 4:e00030.

Simpson, G.D., Patroni, J., Teo, A.C., Chan, J.K. and Newsome, D., 2019. Importance-performance analysis to inform visitor management at marine wildlife tourism destinations. *Journal of Tourism Futures*.

Soldić Frleta, D., 2018. Shifts in tourists' attitudes towards the destination offering. *Tourism and Hospitality Management*, 24:257-270.

Sri Lanka Tourism Development Authority (SLTDA)., 2020. Annual Statistical Report 2019 (Provisional Release). https://www.sltda.gov.lk. Accessed 10 October 2020.

Swanson, S.R. and Hsu, M.K., 2009. Critical incidents in tourism: Failure, recovery, customer switching, and word-of-mouth behaviors. *Journal of Travel and Tourism Marketing*, 26:180-194.

Taplin, R.H., 2012. Competitive importance-performance analysis of an Australian wildlife park. *Tourism Management*, 33:29-37.

Tarrant, M.A. and Smith, E.K., 2002. The use of a modified importance-performance framework to examine visitor satisfaction with attributes of outdoor recreation settings. *Managing Leisure*, 7:69-82.

Tian-Cole, S. and Cromption, J. 2003. A conceptualization of the relationships between service quality and visitor satisfaction, and their links to destination selection. *Leisure Studies*, 22:65-80.

Tian-Cole, S., Crompton, J.L. and Willson, V.L. 2002. An empirical investigation of the relationships between service quality, satisfaction and behavioral intentions among visitors to a wildlife refuge. *Journal of Leisure Research*, 34:1-24.

Tonge, J. and Moore, S.A. 2007. Importance-satisfaction analysis for marine-park hinterlands: A Western Australian case study. *Tourism Management*, 28:768-776.

Vaske, J.J., Kiriakos, R., Cottrell, S.P. and Khuong, M.N. 2009. Importance-performance and segmentation: An application at a biosphere reserve in Vietnam. *Journal of Travel Tourism Marketing*, 26:30-41.

Velando, A. and Munilla, I. 2011. Disturbance to a foraging seabird by sea-based tourism: Implications for reserve management in marine protected areas. *Biological Conservation*, 144:1167-1174.

Wade, D.J. and Eagles, P.F. 2003. The use of importance–performance analysis and market segmentation for tourism management in parks and protected areas: An application to Tanzania's national parks. *Journal of Ecotourism*, 2:196-212.

Walpole, M.J., Goodwin, H.J. and Ward, K.G. 2001. Pricing policy for tourism in protected areas: lessons from Komodo National Park, Indonesia. *Conservation Biology*, 15:218-227.

Wang, W.C. 2015. Visitor perception, interpretation needs, and satisfaction of eco-tourism: the case of Taijiang National Park, Taiwan. *Enlightening Tourism. A Pathmaking Journal*, 5:180-200.

Wang, X., Zhang, J., Gu, C. and Zhen, F. 2009. Examining antecedents and consequences of tourist satisfaction: A structural modeling approach. *Tsinghua Science and Technology*, 14:397-406.

Wardell, M.J. and Moore, S.A. 2005. *Collection, storage and application of visitor use data in protected areas: guiding principles and case studies*. CRC for Sustainable Tourism.

Worboys, S. and Gadek, P.A. 2004. *Rainforest dieback: risks associated with roads and walking track access in the Wet Tropics World Heritage Area*. Rainforest CRC.

Wu, C.H.J. and Liang, R.D. 2009. Effect of experiential value on customer satisfaction with service encounters in luxury-hotel restaurants. *International Journal of Hospitality Management*, 28:586-593.

Yoon, Y. and Uysal, M. 2005. An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism Management*, 26:45-56.

Žabkar, V., Brenčič, M.M. and Dmitrović, T. 2010. Modelling perceived quality, visitor satisfaction and behavioural intentions at the destination level. *Tourism Management*, 31:537-546.

Zhang, S. and Chan, C.S. 2016. Nature-based tourism development in Hong Kong: Importance–Performance perceptions of local residents and tourists. *Tourism Management Perspectives*, 20:38-46.