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Abstract

At present, the resident population of bottlenose dolphins in Bocas del Toro sustains the largest dolphinwatching industry in Panama. Previous studies have shown that Bocas dolphins react negatively to repetitive exposure to dolphinwatching boats. Tourists (129 participants) were surveyed to investigate their perspective on whalewatching and tourism in Bocas del Toro. Interestingly, only 16% of the tourists visited Bocas to observe the dolphins. However because the majority of tourism trips include dolphinwatching activity, tourists will be participating in dolphin tourism regardless of their interests. Results from this study indicated that the majority of tourists, independently of their primary interest in visiting Bocas, significantly preferred trips that were licensed, educational, and in compliance with dolphin watching practices. These results strongly suggest that current dolphinwatching practices in Bocas del Toro could be lessening tourists' level of satisfaction. Tourists' strong opinion on the unmanaged dolphinwatching in Bocas could be the result of their interest in environmental protection and Panama's lack of such. Additionally, tourists would prefer to have whalewatching trips with educational elements, licensed boat operators, and boat operators that follow whalewatching regulations.

Introduction

Bocas Del Toro is a province of Panama that borders the Caribbean to the south of the Costa Rican border. It consists of a strip of mainland and its islands. The capital of the region is also called Bocas Del Toro (or Bocas Town) which is on the main island of Isla Colón.

The resident population of bottlenose dolphins (*Tursiops truncatus*) in Bocas del Toro sustains the largest dolphin watching industry in Panama (May-Collado et al. 2012, 2014). The rapid and disorganized growth of dolphin watching activity has resulted in an

exponential increase in boat-dolphin watching interactions (May-Collado et al. 2014). This repetitive exposure to boat traffic is reducing foraging time and increasing avoidance behaviors (May-Collado in prep.). Furthermore, because boats do not have mufflers to reduce engine noise, dolphins are often exposed to high noise levels. In Bocas dolphins respond to noise levels by lowering the frequency and increasing the duration of their communication signals, two well-known mechanisms used by cetaceans to avoid signal masking (May-Collado and Wartzok 2008, May-Collado and Quinones-Lebron 2014). Another outcome of high boat presence is *in situ* competition among tour operators, which in 2012 and 2013 resulted in 10 dolphin fatalities due to collisions with boats (May-Collado et al. 2012). Furthermore, a number of dolphins have been observed with mutilated fins, tails, and marks of propellers on their bodies (May-Collado pers. comm.) Non-fatal collisions during dolphinwatching activities can have sub-lethal effects by impacting the dolphins' ability to perform important biological activities such as feeding and resting (Parsons 2012).

Most dolphinwatching vessels leave from Bocas Town in Isla Colon, a location that has become a busy tourist destination since the start of a rapid tourism boom about ten years ago (Kayes 2005). Bocas Del Toro has had to accommodate a high level of tourism with very little infrastructure in place (Kayes 2005). This has put a lot of pressure on the environment and the local species.

What once was an archipelago of islands populated by indigenous communities with stilt houses is now subjected to the pressures of extensive human activity. Bocas is now a landscape with luxurious hotels, and the high demands of tourists have resulted in an increase in pollution from plastic waste, raw sewage, and oil (pers. obs). In the tourist guide book *Lonely Planet* for Panama, this statement was found in the description of Bocas, "Unfortunately, the secret is out, and although locals have thus far welcomed the increase in tourism, bulldozers have already started clearing land for condos and

resorts... It's difficult to predict the future of the islands, but this is certain – see Bocas now, as the unspoiled beauty of the islands won't last forever” (Reid et al. 2007, p. 681).

To date, there has not been an in-depth study that evaluates tourists' perspectives on conservation issues and tourism in Bocas del Toro, including the sustainability of dolphin watching. Since Bocas del Toro has become a major tourist destination in Panama, and because tourism developed so fast, the opinions of the tourists themselves are critical in shaping the development of the tourism industry in the region. Most tourists stay in “downtown” Bocas, on Isla Colon, the main island (Kayes 2005). This town is approximately 1.5 km long and consists of only two main roads (Kayes 2005). It is a condensed area where all the tourist shops, restaurants and hotels are located. The majority of the tourism trips depart from this location; however there are also private hotels in the various islands that have their private boat fleets for trips (May-Collado et al. 2014). Most of the trips consist of multiple short activities (swimming, dolphin watching, and snorkeling) that usually cover most of the Archipelago in a few hours (May-Collado et al. 2014, 2015). All of the companies offer daily trips to Dolphin Bay and all have similar itineraries, thus boats generally arrive in Dolphin Bay about the same time or within a few minutes of each other. Boats arrive in Dolphin Bay - located in between Isla Cristobal, and the mainland Bocas Del Toro, Almirante - at 9:30 a.m., 12:30 p.m., 1:30 pm., and 2:30 p.m. (May-Collado et al. 2014). Dolphinwatching trips in Bocas del Toro are available every day, all year long, because their dolphin population shows high site fidelity to the area (Barragan-Barrera et al 2012). Thus, their predictable presence makes dolphinwatching a year round activity.

The resolution ADM/ARAP NO. 01 (2007) describes norms of conduct for dolphin and whalewatching operators. The regulations require boat operators to remain at a distance of 100 meters from cetaceans, that there not be more than 2 boats at a time, and that viewing is limited to 30 min (May-Collado 2013). However, these norms are not followed resulting in unsustainable dolphin watching activity. Recently, May-Collado et

al. (2014) reported that a group of dolphins can be followed by 19 boats simultaneously and interact with 39 boats within a period of one hour. Contributing factors in the lack of compliance to the regulations are the lack of training opportunities and the fact that there are no requirements for licensing.

May-Collado and colleagues are currently evaluating the archipelago with the approval of the Autoridad Maritima de Panama (AMP) to obtain information on the number of licensed boats and boat captains. According to a senior boat captain in Bocas del Toro, there are over 200 boat captains in Bocas Del Toro. Private residents and private hotels who have their own boats and conduct private dolphinwatching trips (i.e. “recreational whale-watching” as defined in Parsons et al. 2006) are not included in this number. This suggests that the potential maximum number of boats that can be watching dolphins at any one time could be extremely high. During high tourism seasons (late September thru October, and January through February) scientists have estimated that over a 100 boats or more may be simultaneously viewing the dolphins in Dolphin Bay (May-Collado et al. 2014b). This is a major cause of concern for the viability of these local dolphins, which are estimated to number approximately 200-250 individuals (May-Collado et al. 2014b). It has been suggested that 10 of these dolphins have died from boat strikes between the years of 2012 and 2014 (May-Collado et al. 2012).

Numerous studies have shown that without well-enforced tourism regulations and management, whalewatching tourism can cause disturbance and negative impacts on cetaceans (e.g. Au and Perryman 1982; Kruse 1991; Janik and Thompson 1996; DeNardo 1998, Nowacek et al. 2001; Scheidat et al. 2004; Stamation et al 2010; Parsons 2012). For smaller coastal cetacean populations like the population in Bocas del Toro, high levels of dolphinwatching activity are a serious threat. Boat collisions during dolphinwatching activities can have sub-lethal effects, by affecting the dolphins’ ability to perform important biological activities such as feeding and resting (Parsons 2012). The situation is particularly worrisome because a recent study has found that the Bocas

bottlenose dolphins are genetically isolated from other populations in the Caribbean (Barragan-Barrera et al. 2012). A combination of small population size, genetic isolation, and frequent boat-dolphin interactions make this population vulnerable. Special consideration for listing by the IUCN may be warranted for this population.

Appropriate tourism management must be established to minimize any harm (Kessler et al. 2014). Kessler et al. (2014) notes that managing tourism is important for the greater objective of spreading conservation awareness and increasing interest in and willingness to help protect the wellbeing of animals and their habitat. It is however clear that appropriate management is lacking in Bocas del Toro, Panama and much harm is being done at this time. In the past year, thanks to the recommendations of scientists and the International Whaling Commission, Bocas del Toro has begun a process of change.

Tourism in Bocas Del Toro

According to Kayes' (2005) findings, 50% of Bocas residents (local people) live on Isla Colon, and the rest of the Bocas residents are spread throughout the archipelago. Kayes (2005) concludes that a high proportion of locals are exposed to tourists and their lifestyle. In Bocas there are two different types of tourists that visit: Panamanians (domestic tourists) and international tourists. These two kinds of tourists are looking for two different experiences in Bocas del Toro (Kayes 2005). According to Kayes (2005) the majority of tourists said it was "important" to "very important" for "having fun"; "visiting a place" or "having an experience you could not have on your own; learning something new"; and "direct and active involvement with the environment". In addition tourists said that "learning something new", having direct and active "involvement with the environment" and participating in environmentally responsible and/or minimal impact tourism was important (Kayes 2005). Kayes (2005) also discovered that tourists rated being "physically challenged", being "intellectually challenged", and "having a guide" onboard from "neutral" to "important". When Kayes (2005) evaluated the motivations of SCUBA divers against those of other tourists, answers were not significantly different,

except for one motivational factor. SCUBA divers seem to be more interested in participating in environmentally responsible and/or minimal impact trips than other tourists (Kayes 2005).

Based on Kayes' (2005) study, tourists used Bocas del Toro as an *en route* destination in between travels to and from Costa Rica and Panama City. Most of the younger (<30 years of age) tourists were found to be from the Netherlands, Israel and Canada, while most of the older (>30 years of age) tourists were found to be from the United States (Kayes 2005). Although Kayes' (2005) findings are of interest, the study's sample size was limited, "the study was limited by time constraints (only two weeks) and my ability to attend only one tour each day", "I accompanied 7 tours in all" (p.13). The total sample size in the study was not reported. These findings provide rudimentary information about tourists in Bocas del Toro. However, a more thorough survey is essential to gain a better perspective of tourism in Bocas.

Whale and dolphin-watchers

Many studies have revealed that whale- and dolphinwatchers (hereafter referred to as whalewatchers) usually have certain attributes. Females are more likely to engage in whalewatching than males (Tilt 1987; Duffus 1988; Muloin 1996; Hoyt 2001; Finkler 2001; Lück 2003; Parsons et al. 2003; Lück 2015). In Lück's (2015) study 58.4% of the respondents were female, and in Fibly et al. (2015) 69.3% respondents were female.

Studies have also shown that whalewatchers tend to have higher levels of education, with many having college-level degrees (e.g. Tilt 1987; Duffus 1988; Forestell & Kaufman 1990; Neil et al. 1996; Fundacion Cethus 1999; Finkler 2001; Parsons et al. 2003; Mayes & Richins 2008; Lück 2015; Filby et al. 2015). For example, in California, 79% of whalewatchers had at least 4 years of college (Tilt 1987). In the 1980s, when whalewatching was still fairly new in British Columbia, 51% of whalewatchers had a university degree (Duffus 1988). In the 1990s the percentage of tourists with a university degree went up to 70% in British Columbia (Finkler & Higham 2004). Comparably,

Forestell and Kaufmann (1990) and Neil et al. (1996) noted the majority of their whalewatching respondents had higher education as well. In San Julian, Argentina, 72% of the whalewatchers had university degrees (Fundacion Cethus 1999). Parsons et al. (2003) found that 63% of the whalewatching participants in West Scotland had received higher education. Likewise three-fourths of participants in “swim with dolphin” trips in New Zealand, had college-level degrees: 43.4% had a university degree, 22.4% had a postgraduate degree, and 9.4% held a polytechnic certificate or diploma (Lück 2015). In contrast, Lück (2015) reports that 17% had a high school degree, 5% a vocational/trade qualification, and 2% had no formal education. Lastly, Finkler (2001) reported that between 64.7% and 81.2% of orca watchers had a higher degree.

Additionally, in many studies whalewatchers were found to be relatively affluent, with many being middle-class (Tilt 1987; Duffus 1988; Forestell & Kaufman 1990; Iniguez et al. 1998; Parsons et al. 2003). A study in west Scotland conducted by Parsons et al. (2003) found that 89% of the whalewatching participants were middle class, and 63% of the participants take more than one vacation each year. In Forestell and Kaufman’s (1990) study in Hawaii, 62% of the participants had salaries of \$40,000 or more, and 68% of the participants were ages 20-60 years old. The ages of participants vary from country to country: the average age of whalewatchers in New Zealand was 20 to 34 years old (Pearce & Wilson 1995), while the average age of whalewatchers in other regions tends more towards middle-age (Muloin 1996; Duffus 1988; Parsons et al. 2003). Similarly Lück (2015) found 66.3% of the respondents were under 40 years old, and 23.4% were between the ages of 40 and 60 years, and 10% were 60 years and older. New Zealand may however be a special case, as it is known to attract younger adventure-seeking travelers from around the world.

The typical demographic make-up of whalewatching tourists allows whalewatching to be fairly expensive; whalewatching tourists have been found to be bigger spenders than average tourists (Hoyt 2001). For example, in order to take a whalewatching trip in

Península Valdés, Argentina, tourists usually spend from US \$660 to \$1000 in total vacation costs (Iniguez et al. 1998). Draheim et al. (2010) reports most tourists would pay \$30 to \$60 US dollars for a dolphin trip. Additionally, Draheim et al. (2010) noted that 13% of the respondents were willing to pay \$61 to \$90 US dollars per person for a dolphin trip. These examples show that marine trip tourists are bigger spenders.

Somewhat related to wealth and education, Rawles and Parsons (2005) discovered in Scotland that most of the whalewatching participants displayed a high level of environmental activity and responsibility. Among the respondents, 83% said they recycle regularly, 58% said they were members of environmental organizations, and 91% said they participated regularly in wildlife-related activities (Rawles & Parsons 2005).

The majority of whalewatchers in many locations tend to be domestic tourists (Hoyt 2001; Finkler & Higham 2004). For example, in Finkler & Higham (2004) a study conducted in Washington State, USA, 93% of the land based whalewatchers and 94% of the boat-based whale-watchers were residents of the USA. Similarly, whale-watchers in New England were 75.4% American (Hoyt 2001). Likewise, in Queensland, Australia, 70% of the whale-watchers were domestic tourists (Hoyt 2001). In contrast however, in New Zealand only 40% of whale watchers were domestic (Hoyt 2001).

Dolphinwatching tourist satisfaction

There are many elements when creating a satisfactory whalewatching tour for tourists. For instance, seeing cetaceans, being up close, capacity of the boat and weather (e.g. Orams 2000; Higham & Hendry 2008; Kessler et al. 2014) are all potential elements for a satisfactory tour. However, a large part of tourists' satisfaction was following a code of conduct, preventing animal harm, and being educated about their tour experience and about the animals (e.g. Roggenbuck et al. 1990; Forestell 1992; Reid 1993; Neil et al. 1996; Reid 1996; Reid 1999; Orams 2000; Bierman 2001; Lück 2003; Shapiro 2006; Kessler et al. 2014).

Thus, seeing cetaceans in their environment and being able to get close to them are two large components in tourist satisfaction (Shapiro 2006). In addition, Kessler et al. (2004) found satisfaction was garnered as a result of the overall experience, which included good weather and how the tour was conducted (e.g. number of passengers on a trip, trip duration, size or type of vessel, and personal health (Orams 2000).

In Kessler et al. (2014) participants expressed that they would prefer to be closer (i.e., to 50 m), to the whales than Australia's regulations permitted (100 m). However, "the high levels of satisfaction of boat-based whale watchers suggest closer approach distances are not necessary to ensure a positive whale-watching experience" (Kessler et. al. 2014, p.21). In Orams' (2000) study evaluating customers' whalewatching satisfaction, the level of satisfaction was high even when customers did not see any cetaceans. This being said, the closeness of the cetacean to the boat was irrelevant in customer overall satisfaction (Orams 2000). The results from the study of Kessler et al. (2014) indicated that both land- and boat-based whale watchers preferred a smaller capacity sized boat to a 200-passenger vessel. Interestingly, the boat based participants' strongest vessel preference was the motorized 70-passenger boat in comparison to the participants who chose the shore-based or the sailboat as their strongest preference (Kessler et al. 2014). Higham & Hendry (2008) found that shore-based whale watchers are more concerned with the impact of boat noise on the animals as opposed to the boat-based whale-watchers.

Dickson and Benham (2001) add that the more important factors for participants were whether the operator was behaving responsibly around wildlife and whether there was a naturalist guide on the trip. A demonstration of respect for the local environment and species, as well as seeing the operators support of conservation issues were a contributing factor to tourist satisfaction.

In the Kessler et al. (2014) study in Australia, all the participants had a strong preference for minimizing harm to the animals. Despite the fact that tourists would prefer to be closer to the animal than the code of conduct allows, no changes in boat distance are

necessary to ensure a positive experience because tourists prefer to minimize their negative impact (Kessler et al. 2014). As Kessler et al. (2014) suggest, if the minimum distance to reduce harm to the animals is communicated to the tourists, then a positive whalewatching experience can be established.

Shapiro (2006) discovered that whalewatching passengers believe it is important to minimize negative impact on marine life. Approximately, 88% of the passengers said it was “somewhat important” or “very important” to minimize tour boats’ impact on marine life (Shapiro 2006). In addition, 78% of Shapiro’s (2006) whalewatching participants said that it was “very important” for them to know “that the tour operator supports conservation efforts financially”.

Additionally, several studies have shown that the education component on a whalewatching trip has prompted a high level of satisfaction (e.g. Forestell 1992; Roggenbuck et al. 1990; Neil et al. 1996; Reid 1999; Orams 2000; Bierman 2001; Lück 2003; Shapiro 2006; Kessler et al. 2014). To date, educational (e.g. interpretation or educational material) dolphinwatching trips in Bocas del Toro do not exist (pers. obs.). Boat operators are not educated about dolphin biology or their dolphin population (pers. obs.). All of the whalewatching participants in the Kessler et al. (2014) study had a strong preference for having on-board education. Similarly, in three other studies, whale-watchers evaluated educational interpretation on their trip as an important part of the tour (Neil et al. 1996; Reid 1999; Bierman 2001). Several studies have determined that the main reason for tourists to attend nature-based trips is to learn about the local environment and species (Forestell 1992; Roggenbuck et al. 1990; Orams 2000).

In Lück’s (2003) study, 95% of participants agreed “mildly” to “strongly” with the importance of learning as much as they can about wildlife during their vacation. Participants that did not have a guide on board during their trip made comments such as “I would’ve liked more info [sic] about the dolphins and the ecosystem of this place,” and “I think the tours should have more info [sic] about the dolphins and their lifestyles”

(Lück 2003, p.8). On a second whalewatching trip that had on board interpretation, approximately 76% of participants agreed “mildly” to “strongly” that the trip was an educational experience and 63% “mildly” to “strongly” agreed they felt they learned a lot about dolphins (Lück 2003). Shapiro (2006) found that 93% of the whale-watchers said it was “somewhat important” or “very important” for them to listen to and interact with a naturalist guide on the whalewatching vessel. Additionally, in a later study, Lück (2014) reported that respondents who received an educational experience and had a knowledgeable interpreter still indicated that they would have liked to receive more information about the dolphins, their lifestyle, the marine environment, and conservation restrictions and regulations.

It is important to analyze whether current whalewatching tours in Bocas are operating in a satisfactory way for tourists. In Bocas del Toro, boat operators are seen driving circles around the dolphins to entice the dolphins to leap in the wake (Kayes 2005). The boat operators do this because they believe it increases the tourists’ enjoyment and satisfaction. However, this type of action might not be what visitors expect or desire, and this type of “harassing” behavior deters tourists from satisfactory dolphinwatching experiences.

Study investigation

This study investigated the demographic composition of tourists visiting Bocas, and their perceptions, particularly with respect to dolphinwatching and marine conservation. Most tourism trips in Bocas include a stop at dolphin bay to see the dolphins. Therefore this study could include all tourists. Understanding tourist’s opinions on dolphin watching tourism should help support ongoing awareness campaigns. Additionally, information gathered from this study could possibly help with the management of dolphinwatching operations and enhance local marine conservation. Three research questions were evaluated in this study: 1) To what extent do tourists in Bocas de Toro feel that boat

operators should be regulated? 2) Is there a relationship between higher education and views on the importance of having educational dolphin watching trips? 3) What are the perceptions of tourists concerning the Panamanian Government's involvement in protecting the environment?

The hypothesis to be tested for research questions 1 and 2 is: "Tourists support greater dolphin conservation by preferring educational and/or sustainable dolphinwatching."

The hypothesis to be tested for research question 3 is: "Tourists notice environmental issues in Bocas del Toro and believe that stronger government regulations are needed."

In this study dolphinwatching tourists, specifically in Bocas as well as overall tourists in Bocas, will be described and studied. When specifically speaking of just the dolphinwatchers in this study, the term "dolphinwatchers" will be noted. When all the tourists (which include all participants, both dolphinwatchers and non-dolphinwatchers) are mentioned, they will be referred to as "tourists."

Methods

This study was performed in the Bocas del Toro Archipelago in Panama between July and September 2013. In the archipelago, Bocas town on Isla Colón is the main area of tourist activity and is where the majority of tourism trips depart. Thus, this study was conducted on the streets of Bocas town.

Interviews

This study explored Bocas tourists' perspective of tourism and the environment of Bocas by randomly selecting 129 participants. Tourists 18 years or older were approached and asked to participate in an anonymous voluntary questionnaire, which was constructed in compliance with the guidelines of the Human Subject Review Board of George Mason University. The study utilized a pre-written questionnaire as the survey instrument, which

was untimed. Tourists of any race, origin, and gender could participate. Tourists were not required to answer any questions they did not want to answer. The questionnaire consisted of 17 questions. The first 5 questions were to provide a demographic background (gender, age, origin, level of education, and eco-conscience level). The second part of the questionnaire (consisting of 12 questions) was related to tourism, whalewatching tourism and Bocas del Toro's environment.

Data were analyzed using non-parametric statistics. Chi-square tests were used to look at differences in opinions on the above questions at a level of significance of $p < 0.05$. The analysis was conducted in R (64-bit version 3.1.1. R Core Team, 2014) and results are given in percentages or counts.

Hypothesis testing

To test the hypothesis for research questions 1 and 2, "Tourists support greater dolphin conservation by preferring educational and/or sustainable dolphinwatching," statistical tests were applied to the responses to questionnaire questions #14- How important is it to you that your whalewatching boat operators have a whalewatching government license, #15- How important is it to you to have dolphin watching boat operators educated about dolphins, #16- How important is it for a dolphinwatching tour to be educational, and #17- How important is it to you to have dolphinwatching boat operators following Codes of Conduct (whalewatching rules) to prevent harm or disturbance to the dolphins? Likewise, the relationship between answers to questionnaire questions #4 and #6 was analyzed with a Pearson's Chi-squared test, both with and without a Yates' continuity correction.

To test the hypothesis for research question 3 "Tourists notice environmental issues in Bocas del Toro and believe that stronger government regulations are needed," a Pearson's Chi-squared test with Yates' continuity correction was also used to test research question #3 "What are the perceptions of tourists concerning the Panamanian Government's involvement in protecting the environment?" via survey question #9 "In your opinion, do you think there are environmental issues not currently being addressed in Bocas?" and

survey question #8 “In your opinion, from what you have observed, how effective is the Panamanian Government in protecting its environment?” Answers were in the format of “yes” “no” or “not sure” which were coded into two categories, and the “not sure” answers were removed from the analyses. Question 10 “In your opinion, from observation, should the Panamanian government have more, less or the same environmental regulations in Bocas” was also analyzed with a Chi-square test. Respondents answered with either “more”, “less”, “same” and “don’t know”. The “don’t know” answers were ruled out in the resulting analysis.

The statistical program, R (64-bit version 3.1.1.: R Core Team, 2014) was used for Chi-square tests for given probability ($p < 0.05$). Survey questions #8- In your opinion, from what you have observed, how effective is the Panamanian Government in protecting its environment, #14- How important is it to you that your whalewatching boat operators have a whalewatching government license, #15- How important is it to you to have dolphin watching boat operators educated about dolphins, #16- How important is it for a dolphin watching tour to be educational, and #17- How important is it to you to have dolphin watching boat operators following Codes of Conduct (whalewatching rules) to prevent harm or disturbance to dolphins were answered on a five point Likert-scale (1= “Not at all” or “Not Important” or “Not Effective” to 5= “Very” or “Very Important” or “Very Effective”). The answers for these questions were coded for R into 2 categories (A & B). Likert-scale answers 1= “Not at all” or “Not Important” or “Not Effective”, 2= “Little”, and 3= “Somewhat”, were collaborated as category A= “Not Important” ((or for question #8, A= “Not Effective”). Likert-scale answers 4= “Well” or “Important” or “Effective”, and 5= “Very Well” or “Very Important” or “Very Effective” were combined as category B= “Important” (or for question #8, B= “Effective”), because answers 4 and 5 are the definitive statements of importance. This was done as responses of “Somewhat Important” incorporate a certain amount of doubt and thus fall short of a definitive positive opinion.

Results

Descriptive

A total of 129 tourists in Bocas del Toro were randomly sampled from July 2013 to September 2013 during the low tourist season. For this study 72 of the 129 participants were considered dolphin-watchers (this included tourists that have been on a dolphinwatching trip in Bocas and tourists that are planning to go on a dolphinwatching trip in Bocas).

Of 128 survey participants who responded, 45% (n = 58) of them had already taken a dolphinwatching trip in Bocas del Toro. Moreover, 11% (n = 14) were planning to take a dolphinwatching trip, leaving 45% (n = 57) of tourists who were not planning to take a dolphinwatching trip (Table 1). The 56% (n = 72) of participating tourists who had either been on, or were planning to go on a dolphinwatching trip were compared to the remainder of the total data set to determine if they were notably different from the general tourist population.

Table 1. Total number of Dolphinwatching tourists in Bocas del Toro (N=128).

Survey Question	No. Of Tourists
Already been on a trip	58
Planning a dolphinwatching trip (with none previous)	14
No previous or planned dolphinwatching trips	57

*Blanks were assumed to be "no" responses

Of those who provided a gender (n = 109) 37% of individuals (n = 40) were male and 63% (n = 69) were female. Of the 72 dolphin-watchers that responded 62% individuals (n = 38) were female and 38% (n = 23) were male. About 50% of the interviewed tourists were between 22 to 30 years of age (Table 2). Results were similar for dolphin-watchers 52% were from 22 to 30 years old. In general, tourists were found not to be domestic travelers, only 6 % of the tourists were from Panama, and 10% of the dolphin-watchers

specifically were Panamanian (Table 3). About 30% were from United States (27% for dolphin-watchers) and 43% answered “other” (40% of dolphin-watchers) because their country was not one of the listed as an option on the questionnaire (Table 3).

The majority (89% of tourists) of the participants (n=123) had high education qualifications (college qualifications 33%, a Bachelor’s degree 30%, a Master’s degree 23%, and a PhD/JD/MD degree 2%) (Table 4). Only 11% of the respondents had secondary school qualifications (1% had elementary school qualification, and 11% had high school qualification). Numbers were again similar for dolphin watchers that responded (n=70), with 84% of individuals having a higher education (college qualifications 30%, a Bachelor’s degree 30%, Master degree approximately 23%, and 1% PhD/JD/MD), and approximately 16% having only a basic education (1% had elementary schooling, and 14% had high schooling).

When looking at all tourists, most respondents (n=126) were first time visitors, approximately 78%, to Bocas del Toro (Table 5). Ten percent of tourists were second time visitors, 7% were third or fourth time visitors, approximately 2% were fifth or six time visitors and 3% of tourists visited Bocas seven times or more.

When asked to list all the various reasons for their visit to Bocas, 53% of all tourists questioned (n =129, with a total of 304 reasons given) indicated the beach was one of the main attractions (Table 4.6). Nature was the next most popular selection at approximately 42%, with snorkeling in third place at 31%. Nineteen percent of the tourists indicated diving as a purpose for their visit, 17% for surfing, 16% for dolphin tourism, 10% for indigenous tourism, and 6% for sea turtle tourism (Table 6).

When tourists were asked how they heard about dolphin watching tourism (n = 96, with 116 total responses), hotel/hostel was the primary source advertisement or communication to tourists about dolphinwatching trips in Bocas, accounting for 22%

(Table 7). The following source friend/family was 20%, and 19% for travel agent. Locals were another popular source for dolphinwatching advertisement or communication, accounting for 16%. Local flyers were the next category selected as tourists' means of hearing about dolphinwatching trips at 13%, internet was 12% of the participants, and other sources was 12%; as well the least marked source of information was travel books at 8% (Table 7).

Table 2. The age of tourists that responded to survey in Bocas del Toro (n = 125)

Age	18-21	22-30	31-40	41-50	51-60	61>
Total of all Tourist	24	63	24	7	3	4
Percent % of all tourists	19.2	50.4	19.2	5.6	2.4	3.2
Total of Dolphin-Watchers	12	36	15	2	2	2
Percent % of Dolphin-Watchers	17.4	52.2	21.7	2.9	2.9	2.9

*4 did not answer with a single response: Participants that had multiple answers were removed

Table 3. The origin of tourists that responded surveyed in Bocas del Toro

Origin	Costa Rica	Panama	Colombia	U.S.A	Mexico	Canada	Spain	England	Italy	Other
Total of all Tourists (N=124)	4	8	1	37	2	4	9	5	1	53
Percent % of all Tourists (N=124)	3.2	6.5	0.8	29.8	1.6	3.2	7.3	4.0	0.8	42.7
Total of Dolphin-Watchers (N=70)	3	7	1	19	1	1	8	1	1	28
Percent % of Dolphin-Watchers (N=70)	4.3	10	1.4	27.1	1.4	1.4	11.4	1.4	1.4	40

*5 did not answer for all tourists with a single response and 2 did not answer for dolphin watchers with a single response: Participants that had multiple answers were removed

Table 4. The level of education tourists in Bocas del Toro have acquired (n=123)

Education	Elementary	High School	College	Bachelors	Masters	PhD/ID/MD
Total of all Tourists (N=123)	1	13	41	37	28	3
Percent % of all Tourists (N=123)	0.8	10.6	33.3	30.1	22.8	2.4
Total of Dolphin Watchers (N=70)	1	10	21	21	16	1
Percent % of Dolphin Watchers (N=70)	1.4	14.3	30	30	22.9	1.4

*6 did not answer for all tourists with a single response and 2 did not answer for dolphin watchers with a single response: Participants that had multiple answers were removed

Table 5. Number of times tourists have visited Bocas del Toro (n=126)

# of Visits	1st Time	2nd Time	3rd or 4th Time	5th or 6th Time	7th or More
Total of Tourists	98	13	9	2	4
Percent % of Tourists	77.8	10.3	7.1	1.6	3.2

*2 did not answer with a single response: Participants that had multiple answers were removed

Table 6. Tourists' activity/attraction purpose of visit in Bocas del Toro (n=129). There were 304 responses given in total.

Purpose	Snorkel	Diving	Sea Turtles	Dolphins	Nature	Indigenous	Beach	Surf	Other
Total	40	25	8	20	54	13	69	22	53
Percent of answers	13.2	8.2	2.6	6.6	17.8	4.3	22.7	7.2	17.4
Percent % of Tourists	31.0	19.4	6.2	15.5	41.9	10.1	53.5	17.1	41.1

*Tourists were allowed to circle more than one purpose for their visit

Table 7. How did tourists hear of dolphin watching trips (n=96) total number of responses is 115.

Individual	Travel agent	Hotel/ hostel	Travel Book	Local Flier	Internet	Friend/ Family	Locals	Others
Total	18	21	8	12	11	19	15	11
Percent % of Responses	15.7	18.3	7	10.4	9.6	16.5	13.0	9.6
Percent % of Tourists	19	22.1	8.4	12.6	11.6	20	15.8	11.6

*33 tourists did not respond thus inferring that their lack of response could have been not hearing of Dolphin watching trips (it could be a "no" I did not hear of dolphinwatching trips or "not responding")

Analysis of Hypothesis I:

The hypothesis "Do tourists support greater dolphin conservation by preferring educational and/or sustainable dolphinwatching?" was accepted.

The responses for question #14 "how important is it to you that your whalewatching boat

operators have a whalewatching government license?” were significantly different, with the proportion of tourists answering “not important” being less than those saying that it is important ($X^2= 70.127$, $df = 1$, $p\text{-value} < 0.0001$, $n=126$). This suggests that a whalewatching trips licensed by the government is an important criterion for all overall responding tourists ($n=126$) (see Fig. 1 below). The proportion of the tourists that answered that a whalewatching government license was B=“important” was 87%, vs. 13% of tourists answering A=“not important”. When comparing the responding tourists that have been on a dolphinwatching trip in Bocas del Toro, or planned on going on a dolphinwatching trip ($n=70$), the result was very similar and also significant ($X^2= 38.629$, $df = 1$, $p\text{-value} < 0.0001$, $n=70$, 87% vs. 13%).

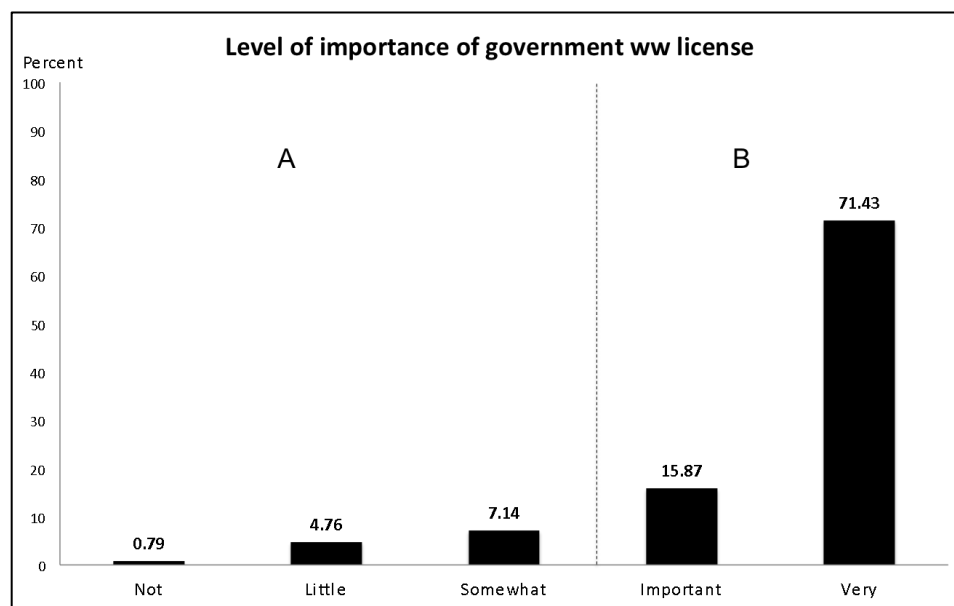


Figure 1. Proportion of tourists who answered “important” to the question: “how important is it to you that your whalewatching boat operators have whalewatching government license?” A majority of 87% responded B=“important” vs. 13% of tourists who responded A= “not important”.

In addition, responses to the question #15 “how important is it to you to have dolphinwatching boat operators educated about dolphins?” were found to be significantly different ($X^2= 91.125$, $df = 1$, $p\text{-value} < 0.0001$, $n=128$). This indicates that it is important to all overall responding tourists that dolphin watching boat operators be

educated about dolphins (Fig. 2). Of the tourists that responded (n=128) 92% answered that it is important for dolphin watching boat operators to be educated about dolphins, while 8% of the tourists answered not important. When comparing the responding tourists that have been on a dolphin watching trip in Bocas or planned on going on a dolphin watching trip (n=72), the results were very similar and significant ($X^2 = 60.500$, $df = 1$, $p\text{-value} < 0.0001$, $n=72$, 96% vs. 4%).

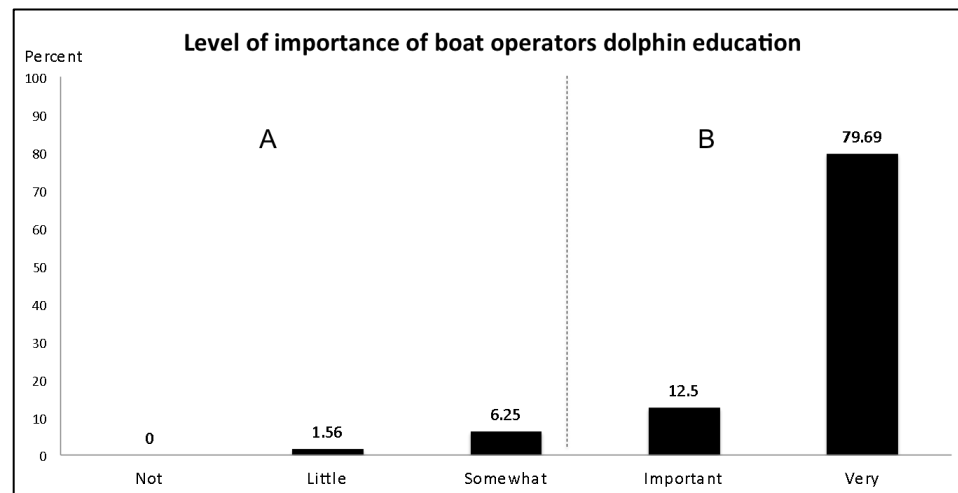


Figure 2. The proportion of tourists who answered B=“important” to question 15 “How important is it to you to have dolphin watching boat operators educated about dolphins?” 92% vs. 8% of tourists who responded A=“not important”.

Finally, for the question #17 “how important is it to you to have dolphin watching boat operators following Codes of Conduct (whale watching rules) to prevent harm or disturbance to dolphins?” responses were found to be significantly different as well ($X^2 = 116.281$ $df = 1$, $p\text{-value} < 0.0001$, $n=128$). Of the overall responding tourists ($n=128$), 98% of them answered that following Codes of Conduct was “important”, whilst 2% of the tourists answered “not important” (Fig. 3). Analysis of only the dolphin-watchers ($n=72$) again provided a very similar and significant result ($X^2 = 64.222$, $df = 1$, $p\text{-value} < 0.0001$, $n=72$, 97% vs. 3%). Thus, it is important to tourists that whale watching codes of conduct are followed by dolphin watching boat operators.

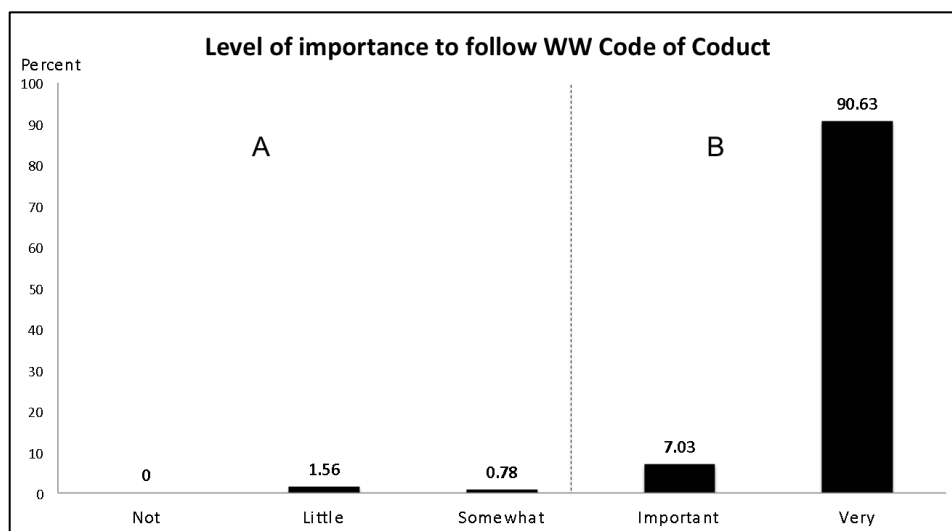


Figure 3. The proportion of tourists who answered “important” to the question “how important is it to you to have dolphinwatching boat operators following Codes of Conduct (whalewatching rules) to prevent harm or disturbing the dolphins?” A large majority of 98% stated that this was B= “important” vs. 2% of the tourists who answered A=“not important”

To assess the desire of tourists to receive education/interpretation, a chi-square test was conducted for the question #16 “importance for a tour to be educational” The difference in desire for the trips to be educational was found to be highly significant ($X^2 = 72.938$, $df = 1$, $p\text{-value} < 0.0001$, $n=128$) (Fig. 4). The proportion of tourists that answered B=“important” to dolphinwatching trips to be educational was 88%, vs. 13% of tourists that answered A=“not important”. Once again, the result for dolphin-watchers ($n=72$) was very similar and significant ($X^2 = 43.556$, $df = 1$, $p\text{-value} < 0.0001$, $n=72$, 89% vs. 11%).

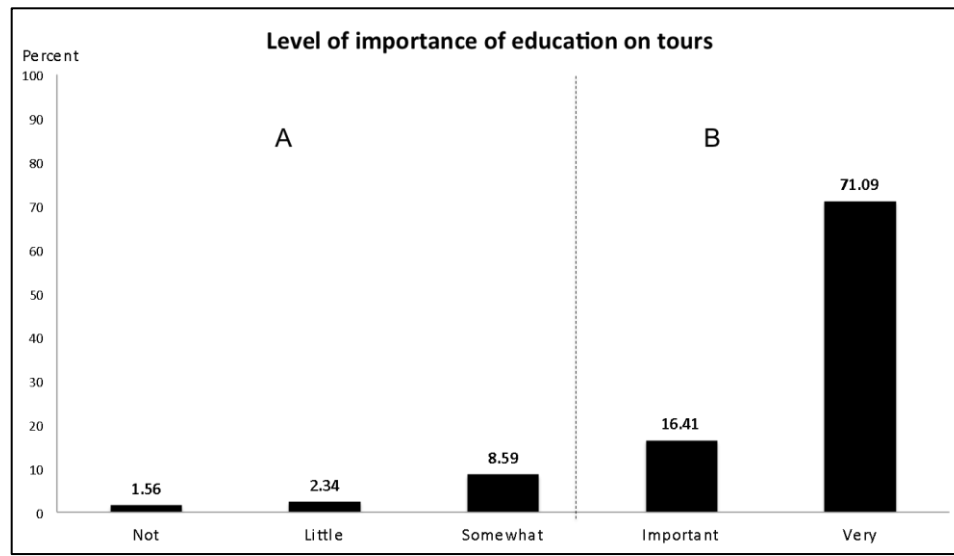


Figure 4. The proportion of tourists who responded B=“important” to question 16 “How important is it for a dolphinwatching trips to be educational?” 87.5% vs. 12.5% of the tourists who answered A= “not important”.

A visual inspection of how tourists with different academic level (question #4) responded to the question #16 “importance for a tour to be educational” suggests that the more educated tourists had a greater preference for on-board education efforts (Fig. 5). However, a Pearson's Chi-squared test with Yates' continuity correction found that there was no significant difference between the groups ($X^2 = 0.453$, $df = 1$, $p\text{-value} = 0.5006$ with Yates, $n=122$). The result was still non-significant when the Yates correction was not used ($p = 0.2687$). However, the potential for the small number of lower educated respondents to have influenced this result must be noted. When comparing the responding tourists that had either been on a dolphinwatching trip in Bocas del Toro, or had planned on going on a dolphin watching trip ($n=70$), the result was similar and non-significant with the Yates correction ($X^2 = 2.349$, $df = 1$, $p\text{-value} = 0.1254$, $n=70$). Removing the Yates correction initially produced a significant difference ($X^2 = 4.326$, $df = 1$, $p\text{-value} < 0.0375$, $n=70$), although application of the Bonferroni correction required for the number of tests we have here would ultimately lead to a non-significant result.

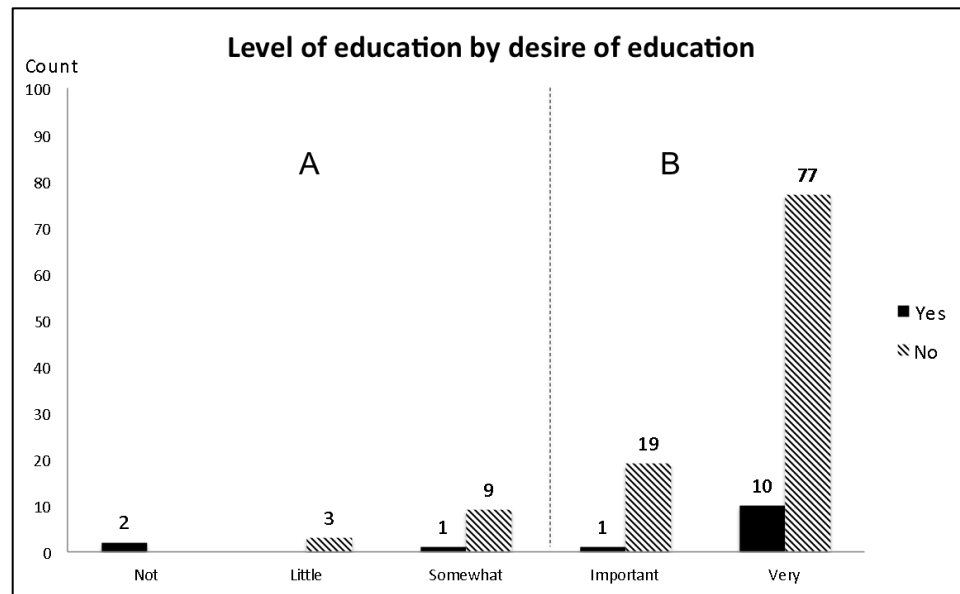


Figure 5. Comparison of the responses to the question of “how important is it for tourists to have an educational dolphinwatching tour” varied with “tourists’ academic level” (N=122). The majority of tourists (107 of the participants) say it is B= “important” to have an educational tour and of those 96 had higher education.

Hypothesis 2 Analysis

Tourists notice environmental issues in Bocas del Toro and believe that stronger government regulations are needed?

Tourists noticed environmental issues and believe stronger government regulations are needed. Results from the Chi-square test demonstrated that responses, which were grouped into the same A & B, two-way split of the five-point Likert scale as used previously, to the question #8 “In your opinion, from what you have observed, how effective is the Panamanian Government in protecting its environment?” were significantly different ($X^2 = 87.2258$, $df = 1$, $p\text{-value} < 0.0001$, $n=124$). The proportion of tourists who answered that the level of the environmental protection of the government was “not effective” was 91.94% vs. 8.06% of the tourists who answered “effective”. When comparing the responding tourists that have either been on a dolphinwatching trip in Bocas Del Toro, or planned on going on a dolphin watching trip ($n=72$), the result was

again very similar and significant ($X^2= 42.6056$, $df = 1$, $p\text{-value} < 0.0001$, $n=71$, 88.73% vs. 11.27%) (Table 6).

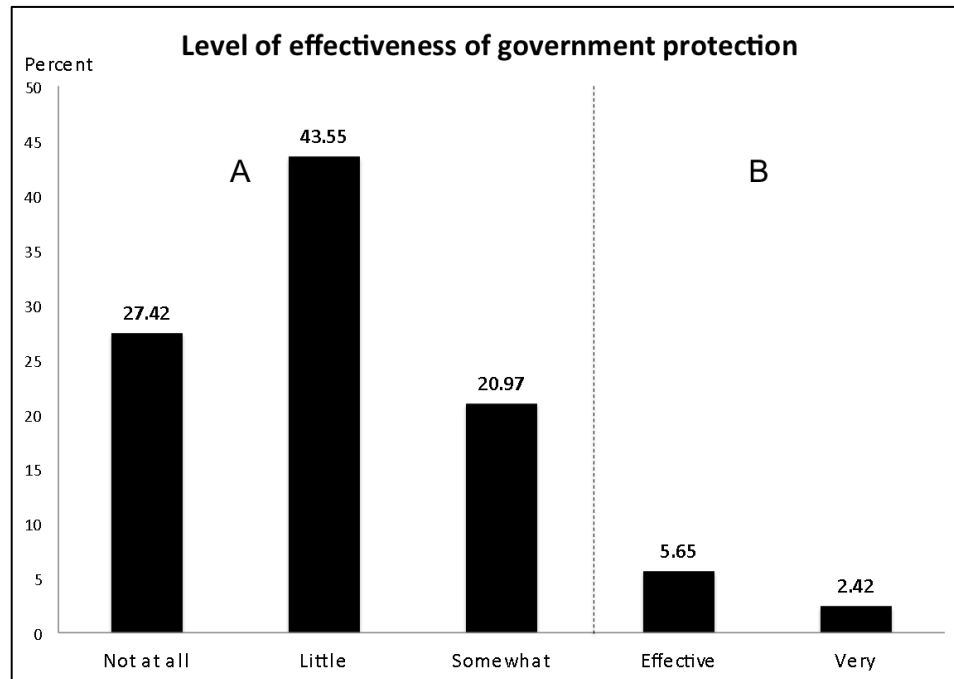


Figure 6. The proportion of tourists who answered effective to the question “In your opinion, from what you have observed, how effective is the Panamanian Government in protecting its environment?” Only 8.06% responded B=“Effective” vs. 91.94% of the tourists who answered A=“Not Effective” (n=124).

A non-significant result a Pearson’s Chi-square test was obtained when assessing the relationship between perceived level of environmental protection and assertion that current environmental issues are not being addressed in both the wider population of tourists, and those linked to dolphinwatching, regardless of the use of Yates correction or not (all tourists $n=89$, $X^2= 1.3606$, $df = 1$, $p\text{-value} = 0.2434$, $N=89$ with Yates, $X^2= 2.7984$, $df = 1$, $p\text{-value} = 0.09436$, without Yates; dolphin-watchers $n=67$, $X^2= 0.7349$, $df = 1$, $p\text{-value} = 0.3913$ with Yates, $X^2= 2.2507$, $df = 1$, $p\text{-value} = 0.1336$ without Yates) (see Fig. 7). In Figure 7 (below) 66% of the tourists that said “yes” there are current environmental issues not being addressed also said that the environmental protection in Bocas was “not effective”.

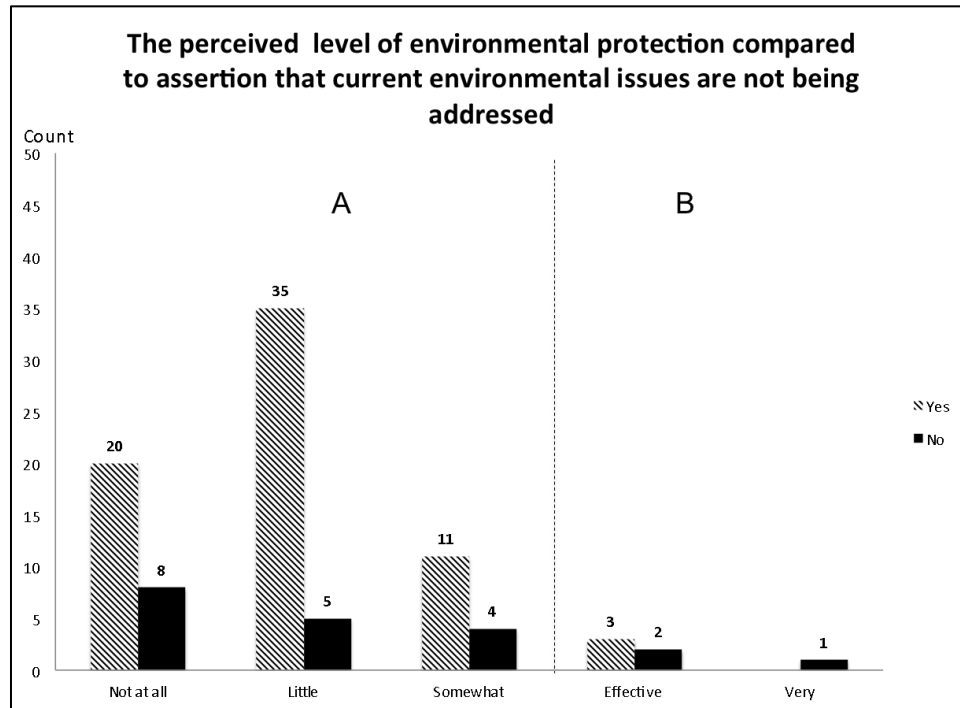


Figure 7. Comparison of the responses to survey question #9 “are there environmental issues not currently being addressed in Bocas” with responses to survey question #8 “effectiveness of environment protection” (n=89). The majority of tourists believe the level of protection is A=“Not Effective” vs. B=“Effective.”

Furthermore, chi-square results for Question 10 “In your opinion, from observation should the Panamanian government have more, less or the same environmental regulations in Bocas” was found to be significant ($X^2= 141.8679$, $df = 2$, $p\text{-value} < 0.0001$, $n=106$; dolphin-watchers $n=67$, $X^2= 67.6842$, $df = 2$, $p\text{-value} = 0.0001$). The majority of respondents said that the Panamanian government should be providing more environmental protection in Bocas del Toro (see Fig. 8).

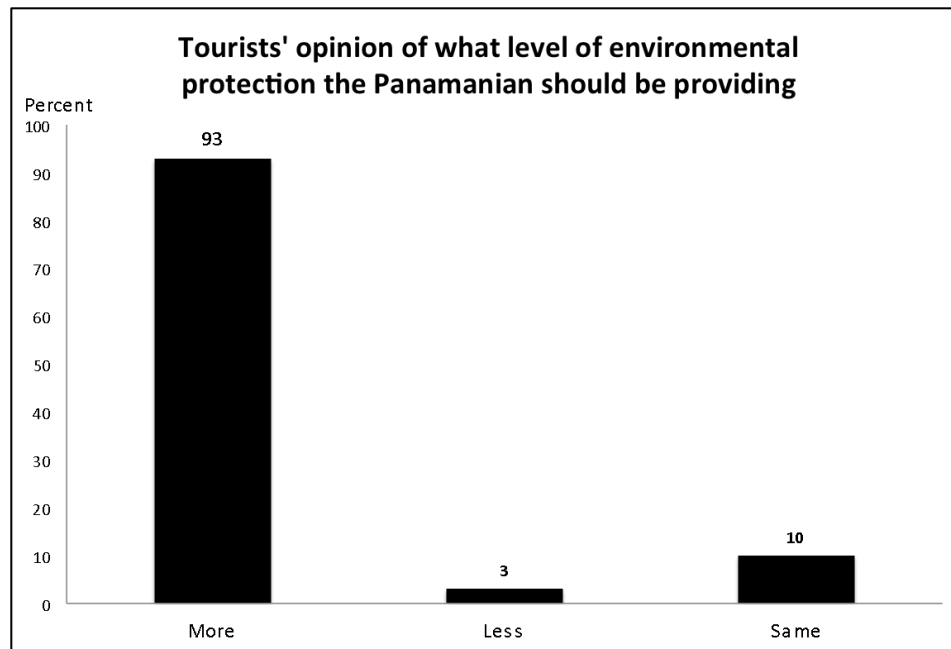


Figure 8. Demonstrates 93% percent of tourists believe the Panamanian government should have more environmental protection in Bocas del Toro.

Discussion

This study, conducted in summer of 2013, evaluated the perspective of tourists in Bocas del Toro. Overall, tourists indicated strong conservation opinions and concerns for Bocas del Toro's marine environment and dolphin tourism. This included all tourists, not just tourists taking dolphinwatching trips. However, responses for just dolphinwatchers (that includes tourists that have gone on a dolphinwatching trip in Bocas and tourists that are planning to go on a dolphinwatching trip in Bocas) (n=72) showed little difference from all tourists (n=129) responses. Taking a dolphin tourism trip in Bocas was thus apparently not a factor in influencing local conservation thinking.

In support of findings from other regions (e.g. Tilt 1987; Duffus 1988; Forestell & Kaufman 1990; Fundacion Cethus 1999; Parsons et al. 2003; Mayes & Richins 2008) 84% of dolphinwatching tourists in Bocas had received higher education. Similar to Pearce & Wilson (1995), 52% percent of Bocas del Toro dolphinwatching tourists were ages 22-30 years old, thus differing from the majority of other studies (e.g. Muloin 1996;

Duffus 1988; Parsons et al. 2003) that have reported more middle-aged whalewatchers. Only 3% of dolphinwatchers in Bocas were ages 41 to 50 years old and 6 percent were 51 years or old. However, as in New Zealand, this finding could be due to a targeted audience factor. Bocas del Toro has a reputation for being a “party spot” for backpackers (pers. obs.). It also does not have much accommodation or many attractions for young families (pers. obs.). Thus, middle-aged tourists may choose not to travel to Bocas because of its reputation. Interestingly, contrary to other studies (Hoyt 2001; Parsons et al. 2003; Finkler & Higham 2004) only 10% of dolphinwatchers were domestic tourists from Panama – a more extreme proportion than even New Zealand (Hoyt 2001). In contrast, 27% of dolphinwatchers were from the USA and a large majority (40%) came from countries not specifically listed on the questionnaire (i.e., not Panama, USA, Costa Rica, Columbia, Mexico, Canada, Spain, UK or Italy). However, it is possible that domestic tourists may represent a higher proportion of Bocas visitors during high tourism seasons which coincide with Panamanian government holidays. In April and November a large number of Panamanian tourists come to Bocas during ‘Semana Santa’ and the ‘Festival del Mar’. Therefore, during this time there can be a higher percent of domestic tourists than when this study was performed.

The results of this study show that tourists do not think highly of the current dolphinwatching practices in Bocas del Toro, Panama. Dolphinwatching trips in Bocas Del Toro lack an educational component, lack compliance to any whalewatching code of conduct, do not have operators with whalewatching licenses, and the boat operators are not formally trained or have not received education about dolphins. Tourists in Bocas del Toro prefer these factors.

This study shows that tourists in Bocas would prefer whalewatching trips with educational elements. As described in Kessler et al. (2014) and many other studies (e.g. Forestell 1992; Roggenbuck et al. 1990; Neil et al. 1996; Reid 1999; Bierman 2001; Orams 2000; Shapiro 2006; Lück 2003), tourists who go on nature-based tours are

interested in learning about the nature they are viewing. If educational components were supplied, tourists' satisfaction levels with the trip would increase. Unfortunately in Bocas del Toro dolphinwatching trips do not have an educational component. Therefore, it could be hypothesized that adding an educational component would increase satisfaction levels among tourists.

Tourists in Bocas Del Toro also would prefer to be on a whalewatching trip that has a boat operator with a government whalewatching license. Moreover, if boat operators had a government whalewatching license, they would know the Codes of Conduct that minimize harm to the animals. Similar to the findings of Shapiro (2006) and Kessler et al. (2014), tourists highly prioritize minimizing the negative effects that their trips have on the animals they are viewing. In Bocas del Toro, trip operators do not follow the Code of Conduct and approach the dolphins too closely (Sitar et al. 2014). According to Kessler et al. (2014), even though tourists might say they prefer to be closer to the animals, satisfaction would remain high if they were informed of the reasons behind any required separation distance because preventing harm is more important to them than proximity.

For the reasons outlined above, tour operators in Bocas need to be informed of this study's findings. Responding to the concerns raised here could help improve tourist satisfaction with their dolphin trips. Boat operators need to be educating their tourists about the dolphins, the marine environment and whalewatching regulations in Panama.

Furthermore, as evidenced by current studies from Kessler et al. (2014) and Lück (2003), tourists are more concerned with reducing harm and would like to learn about conservation regulations. It is thus recommended that operators keep tourists informed about whalewatching guidelines. Ideally the regulations should be displayed on every boat in Bocas del Toro, visible for all tourists to see. In addition, educating the tourists about whalewatching guidelines (along with adherence to the guidelines) would likely increase satisfaction with the tour experience as a whole.

Tourists and their behaviors can have many harmful effects on host cultures and the local environment (Blangy & Wood 1993). During this study there were many occasions when tourists on dolphinwatching trips behaved inappropriately and harmfully towards the dolphins (pers. obs). Tourists would splash their hands in the water in hopes of calling the dolphins over and on two occasions tourists jumped off their boat into the water to swim after the dolphins (pers. obs.) (See Photo 1). In addition, in Claiborne's (2010) study the local host community in Bocas was concerned that local youths were picking up tourist's bad behaviors.



Photo 1. Tourist from a dolphinwatching boat jumping off the boat to swim after dolphins.

Moreover, if tourists in Bocas del Toro know about the guidelines they could help avoid these harmful behaviors. As suggested by Parsons and Woods-Ballard (2003), tourists might even help to 'police' whalewatching operators' behavior.

One option is to have the trip operators educate their customers about the 'do's' and 'don'ts' for the area with the culture and history of Bocas del Toro (i.e. associating respect for the locals and the environment). This could help minimize problematic behaviors like poor manners, and help minimize harmful actions to the local environment and animals.

In addition, the results demonstrate that tourists notice the problematic environmental issues in Bocas del Toro, and the lack of government action. Figure 7 suggests that the

majority of tourists interviewed believe environmental issues were not being addressed (i.e. “yes” to question #9); they also believed that the level of environmental protection was not effective (i.e. B = “not effective” to question #8). However, because of the low sample size, especially for “no” answers to question #9, the analysis is not significant. Tourists also indicated that the Panamanian government should provide more environmental protection. In conclusion, stronger government environmental protection would not only benefit the environment, but also potentially help tourism. If the environmental situation in Bocas del Toro is not dealt with, tourist numbers may decline as the environment degrades further.

Recommendation for further study

This study finds that tourists visiting Bocas del Toro are first time visitors with little interest in seeing wild dolphins. However, because of the way trips are organized they all end up visiting Dolphin Bay where they become aware of the poor dolphin practices of the industry in the region. The interviews reveal poor satisfaction in the dolphinwatching experience and provide strong opinions about the need for regulation and sustainability. The fact that few tourists return may indicate the need for a marketing strategy that goes along with conservation strategies to develop sustainable trips that increase tourism satisfaction while enhancing the protection of the natural resources in the archipelago.

It is important to note that some questions in this study pertaining to participant preferences were direct questions that carried the risk that participants would respond with answers that they believed were socially acceptable. For example, the question, “In your opinion, do you think there are environmental issues not currently being addressed in Bocas?” (Question 10 in Appendix) could have placed the respondent in the position of making the assumption that there are already environmental issues occurring in Bocas, whereas the respondent may or may not felt this to be the case. It is suggested that the next questionnaire written for Bocas del Toro tourists be written in a “stated choice” form as used in Kessler et al. (2014) to prevent tourists from selecting “socially acceptable”

answers. The stated choice experiments conducted by Kessler et al. (2014) address the problems of direct questions by having participants select scenarios that allow their preferences to be indirectly ascertained from their answers. Because this survey was to evaluate the perception of tourists in Bocas del Toro, it is suggested a similar survey be done on just dolphin-watchers.

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Appendix

Tourist Questionnaire:

Questionnaire for Bocas Tourists

Please circle your answers.

1. Gender

Male Female

2. Age

18-21 22-30 31-40 41-50 51-60 61<

3. Which country/state are you from?

Costa Rica Panama Colombia U.S.A. Mexico Canada Spain England
Italy
Other _____

4. Level of Education

Elementary High School University: College Bachelor
Masters PhD/JD/MD

5. Are you a member of an environmental group?

Yes No Which? _____

6. How many times have you traveled to Bocas del Toro?

1st time 2 3-4 5- 6 7 or More

7. What is the purpose of your visit to Bocas del Toro?

Diving Sea Turtles Dolphin Watching Indigenous community Nature
Beach Leisure Other _____

8. In your opinion, from what you have observed, how effective is the Panamanian Government in protecting its environment? 5- Very Effective and 1- Not At All Effective

1 2 3 4 5

9. In your opinion, do you think there are environmental issues not currently being addressed in Bocas?

Yes, and if so what _____ No Not sure

10. In your opinion, from observation should the Panamanian government have more, less or the same environmental regulations in Bocas.

More Less Same Don't Know

11. Have you been on a dolphinwatching trip in Bocas del Toro?

Yes No

12. If not, are you planning to go on a dolphinwatching trip?

Yes No

13. How did you hear about dolphinwatching in Bocas del Toro?

Travel agent Hotel/Hostel Travel book Local fliers Internet Friends/Family
Locals Other _____

14. How important is it to you that your whalewatching boat operators have whalewatching government license? 5- Very Important and 1- Not important

1 2 3 4 5

15. How important is it to you to have dolphinwatching boat operators educated about dolphins? 5- Very Important and 1- Not important

1 2 3 4 5

16. How important is it for a dolphinwatching trip to be educational? 5- Very Important and 1- Not important

1 2 3 4 5

17. How important is it to you to have dolphinwatching boat operators following Codes of Conduct (whalewatching rules) to prevent harm or disturbance to dolphins? 5- Very Important and 1- Not important

1 2 3 4 5