



Does coral bleaching impact tourists' revisitation? A case of Mu Ko Surin Marine National Park, Thailand

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Abstract

Since massive bleaching of corals has taken place in Mu Ko Surin National Park, the number of tourists to the park has reduced by more than half of usual number. In order to understand whether the revisitation of tourists has been impacted due to the coral bleaching, this paper, through structured questionnaire surveys, investigates tourists' revisitation and the factors influencing it. Logistic regression models were used in analysing the factors influencing repeated visitations. The results show that, despite the destination being highly affected by coral bleaching and tourists strongly agreeing that coral has been severely degraded, more than a half of respondents are willing to revisit the park, and two-thirds of the respondents are satisfied with tourism activities. Five factors were found to significantly influence the tourists' revisits. These include tourist's perception on scenic beauty of the area, snorkelling experience, waste management, changes in tourism experience and tourists' satisfaction.

Key words: Coral bleaching, tourists' repeated visits, tourists' perception, tourists' satisfaction, climate change.

Introduction

Many tourist destinations have become vulnerable to climate change^{3,7}. Coral is an important resource for marine tourism and degradation of coral can affect tourism in certain areas. Rising temperature of sea surface which is a result of climate change can lead to coral bleaching^{2,19}.

Studies conducted in the Andaman Sea and Gulf of Thailand have reported the incidence of massive coral bleaching due to temperature increase, particularly during April-May 2010, as the sea surface temperature rose to 30°C and above¹. Mu Ko Surin National Park (MKSNP) of Thailand in the Andaman Sea is a popular destination for tourists, as it is one of the best places for snorkelling in Thailand⁶. However, shallow coral reefs, which are the main resources for tourism activities, have been greatly affected by global warming, leading to the loss in the most attractive tourism destination. Accordingly, it is expected that coral bleaching will affect tourists' travel behaviour because environmental quality indirectly influences the attitude of people^{15,16}. However, tourists' perception of changing coral and marine life might be expected to vary as their characteristics are not homogeneous. Tourists who are most sensitive to such impacts may stop visiting an area entirely, or not recommend a particular tourist destination to other tourists. Particularly regarding climate change impact, tourists have the greatest adaptive capacity to shift destinations^{21,24}. As a result, changes in tourism resources and tourists flow could lead to unsustainable tourism.

There is limited information about how tourists respond to severe coral bleaching occurring in reef systems. Moreover, the studies on snorkelers' and divers' perceptions and tourists' reaction to coral degradation as a result of global warming have remained scarce. Hence, more substantiated insights into

perception on coral degradation and tourists' likelihood to return to affected locations are needed in order to understand whether coral bleaching will change tourists' behaviour in marine environments. It is believed that knowledge about tourists' perception of environmental change, and the likelihood of revisitation of tourists, might provide appropriate adaptation measures for park managers, planners and tourism stakeholders. In addition, the result of the study is crucial for marine national parks to determine how coral bleaching impacts tourists' perceptions, and whether or not coral degradation is a main factor influencing tourists to choose the same holiday destination in the future. Based on this premise, the objectives of this study are to determine tourists' perception and revisitation likelihood and to gain insight into the factors influencing revisitation in relation to degradation of tourism resources.

Materials and Methods

This study employed an on-site survey in Mu Ko Surin National Park (MKSNP). The average number of tourists visiting the park per year are 22,794, of which 75% are Thai⁶. Data were collected using structured questionnaires, which were administered through face-to-face interviews during peak tourist season between February and March 2011, (almost a year after the coral bleaching incident in MKSNP). A total number of 200 tourists (100 international and 100 domestic) were interviewed by using a simple random sampling technique. The language used in the questionnaire was English for foreigners and Thai for local tourists. Based on literature, the factors considered influencing revisitation in the study are given in Fig. 1.

Interviews were conducted in two key tourism areas within the

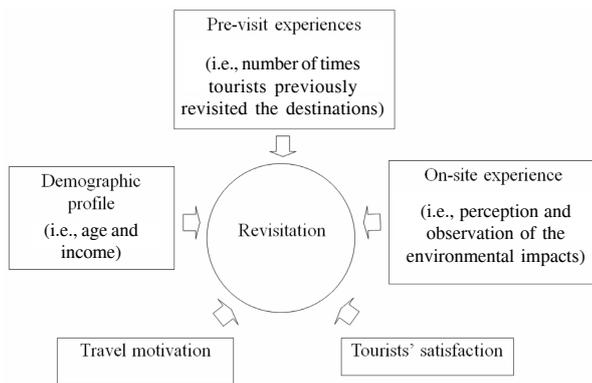


Figure 1. Factors influencing revisit of tourists.

park: Mai Ngam Beach and Chong Khad Beach. The first part of the questionnaire aimed to gather socio-demographic data (age, gender, education, net income and place of residence). The succeeding parts were intended to inquire the past experiences of tourists during their travels to MKSNP. Information regarding past visits were documented with open-ended questions asking tourists about the number of times that they have visited the destinations. Moreover, tourists were also asked about the motivation to travel and the desired tourism experience on an ordinal scale from 1 (not important) to 5 (highly important). They were also asked about their perceptions on the value and level of degradation of the tourism resources using a five-point Likert scale from “strongly disagree” (1) to “strongly agree” (5), which included questions on their observation of the environmental impacts of coral bleaching on their tourism experience and on possible repeat visitations. Lastly, the tourists were also asked about their overall satisfaction of their current visit using a five-point Likert scale ranging from “strong dissatisfaction” (1) to “strong satisfaction” (5).

The data was analysed through descriptive statistics to indicate the tourists’ responses to each question and to ascertain the distribution of the respondents. Furthermore, logistic regression was used to assess the statistical significance of variation in tourists’ revisits, using the 95% level of significance in testing the significance of the various associations.

Analysis of the factors influencing tourists’ revisits to Mu Ko Surin National Park: In order to identify the factors that influenced tourists’ decisions to revisit MKSNP, logistic regression of the outcome variables considered as binary or dichotomous was applied to analyse the data. The goal of the logistic regression is to identify the best-fit model that describes the relationship between a binary dependent variable and the set of independent variables²⁵. The dependant variable is usually dichotomous and can take the value 1 as the probability of tourist revisits or the value 0 as the probability of non-revisits. The function of the probability for tourist revisits could be expressed as:

$$\text{Logit}(p) = \beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \dots + \beta_k \cdot x_k$$

$$p = \exp(\beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \dots + \beta_k \cdot x_k) / (1 + \exp(\beta_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \dots + \beta_k \cdot x_k))$$

Where, p is the probability of given outcome to be predicted (i.e. the probability of tourist revisits in this study), X_1 - X_k are independent variables, β_0 is the constant of the equation, and β_1 -

β_k are coefficients of the predictor variables.

Logistic regression was performed according to the binary logistic procedure in SPSS 16.0. Before analysing the logistic regression, 36 independent variables were analysed using Pearson correlation coefficients to determine the variables that were highly correlated with the dependent variables as tourist revisits.

Results

Demographic profile: Of the 100 foreign tourists and 100 Thai tourists interviewed, more than a half (52%) and nearly three-fourths (72%) of the foreign and Thai respondents, respectively, were female. To both foreign and Thai respondents, 36.4% and 44%, respectively, belonged to the age group of 20-30 years old. The majority of the respondents (88%) had completed college/university levels of education. The average annual income of foreign respondents was much higher (49,527 USD) compared to 14,008 USD of Thai respondents. More than a half of the foreign respondents (62%) who visited MKSNP came from Europe, while 27%, 9% and 2% were from North America, Asia and Australia, respectively. Also, the distribution of Thai respondents by regions showed that the majority (60%) were the residents of the central region of the country.

Past experience of tourists visiting Mu Ko Surin National Park: Tourists were asked about their past experience and the number of times they have visited the park. The results show that about two-thirds (68.5%) of the total respondents had not visited MKSNP before and they were visiting for the first time, while only one-third (31.5%) of them had visited the park before; the latter included 33% Thai respondents and 30% foreign ones. The average times that respondents visited MKSNP was 3.3. 57% respondents had visited the park at least one or two times. Furthermore, respondents who had been to the park before have experiences in snorkelling (96.8%) and diving (12.7%), indicating that snorkelling is a popular activity for tourists, especially for foreigners.

Motivation for visiting Mu Ko Surin National Park: Since tourist attractions in the park consist of natural resources, tourists were asked to indicate the importance of such attractions in their motives to travel and their preferred activity in the park. The response was recorded on an ordinal scale from 1 (not important) to 5 (highly important). The overall assessment indicated that observing and enjoying the coral reefs and marine life are very important in influencing the travel decisions of both foreigners (mean scale of 4.60) and Thai (mean scale of 4.58) (Fig. 2). In addition, relaxation in a peaceful place (mean = 4.60) and climate condition in a marine destination (mean = 4.50) are very important for Thai respondents. However, for foreign respondents, it was found that nature and scenery (mean = 4.34) and wildlife in the park (mean = 4.24) were of very high importance.

Tourists’ perceptions on coral degradation and its impact on marine life: In order to gain a better understanding of tourists’ perceptions on coral bleaching and its impact on the ecosystem, the tourists were asked to indicate what they experienced and observed about the corals and marine life in the park on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). The results indicated that Thai respondents were the most sensitive to changes in the coral reefs (Fig. 3). They strongly agree, as shown

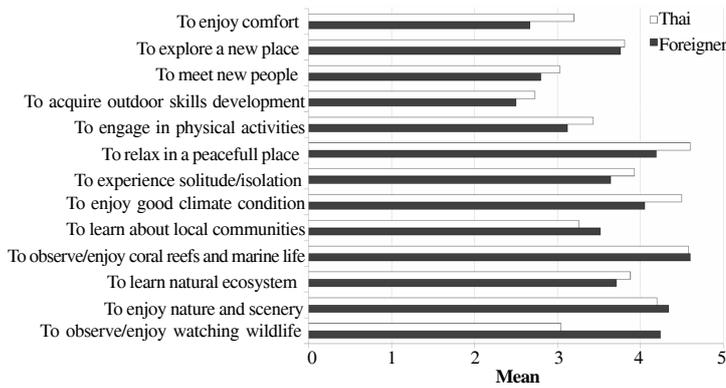


Figure 2. Tourists' motivation to travel to MKSNP.

Note: Not important (N) = 1.00-1.80; Low importance (L) = 1.81-2.60; Moderate importance (M) = 2.61-3.40; High importance (H) = 3.41-4.20; Very high importance (VH) = 4.21-5.00.

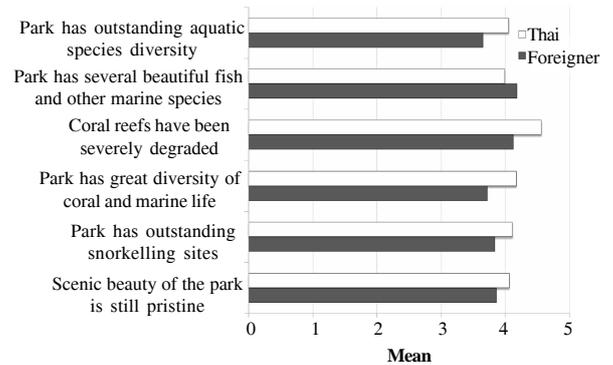


Figure 3. Tourists' perception on resource value and impacts on marine life.

Note: Likert scale: Strongly Disagree (SDA) = 1.00-1.80; Disagree (DA) = 1.81-2.60; Neutral (N) = 2.61-3.40; Agree (A) = 3.41-4.20; Strongly Agree (SA) = 4.21-5.00.

by mean response of 4.56, that the coral reefs in the park have been severely degraded. They also agreed that coral and marine life has great diversity (mean = 4.17), and the park still has outstanding snorkelling sites (mean = 4.11). On the other hand, foreign visitors agreed that MKSNP has many beautiful fish and other marine species (mean = 4.18) and scenic beauty of this park is still pristine (mean = 3.86). However, they also felt that coral reefs in this park had been extremely degraded (mean = 4.12).

Regarding tourists' perceptions, the study found that the perceptions of foreign and Thai tourists about coral degradation had some differences. After recognising the fact that some coral reefs have been severely degraded, the foreign tourists still perceived that MKSNP has many beautiful fish and other marine species, which attracts them to revisit the park, unlike Thai respondents who perceived degradation of coral reefs as a serious setback for tourists' attraction.

Environmental problems: In relation to environmental problems in the park, it was found that the majority of respondents (96%) thought that coral mortality is the main environmental problem in the park. Nearly a half (46.9%) indicated that coral mortality is a highly severe environmental problem. In addition, the majority of respondents (82.5%) were also concerned about the pollution from plastic materials in MKSNP but this was not seen as a serious problem. 62% of respondents mentioned that unmanaged wastes contribute to environmental problems, but only one-third (31.5%) thought that the problem has medium severity. More than one-half of the respondents (59.5%) were concerned about coastal erosion, and almost a half (43.7%) considered such problems to be medium severity. 4% of respondents were also concerned about the air and noise pollution from long tail boats, which is another environmental problem in the area.

Impacts of coral bleaching on tourism: Coral bleaching has impacts on tourists' experience visiting the area, which can eventually affect their revisitation. Almost all foreign and Thai respondents (99%) cited coral bleaching as one reason that negatively impacted their tourism experience (Table 1). Two-thirds of the total respondents (61%) indicated that although the coral remained in its current degraded condition, they intend

to return, as indicated in their desire to revisit the park at a moderate level (47.5%). Similarly, 69.5% of total respondents also indicated that they were satisfied with their tourism experience in MKSNP. This shows however that current tourists may potentially revisit the area. This may be due to the fact that some tourists have difficulty in making decisions related to their future visit, and also for the sake of avoiding negative comments towards the park. However, 34.5% of Thai respondents specifically rated coral bleaching as having highly negatively impacted their experience, leading to potentially non-revisit to the park if the situation continues.

Factors influencing tourists' revisitation to the park: Tourists' revisitation to MKSNP is influenced by many factors, which differ between foreigners and Thai tourists as shown in Table 2. The logistic regression analysis on the response of foreign tourist respondents explains the present data well at the -2 Log likelihood of 46.043. The overall percentage was correctly predicted at 88%, and the model explained 78.6% of the variability. In addition, the model was statistically significant at 0.01 level of confidence. The three independent variables which significantly influence foreign respondents' revisitation or intention to revisit were: the tourists'

Table 1. The impacts of coral bleaching on tourism experience, revisits and overall tourists' satisfaction.

Statement	Alternative answers	Respondents (%)		
		Foreigner	Thai	Both
Coral bleaching in this park negatively impacts on tourism experience	Yes	99.0	99.0	99.0
	No	1.0	1.0	1.0
Degree of impact	Very low	8.0	6.1	7.0
	Low	10.1	4.1	7.1
	Moderate	26.3	24.2	25.3
	High	29.3	31.3	30.3
Willingness to revisit MKSNP	Very high	26.3	34.3	30.3
	Yes	63.0	59.0	61.0
	No	37.0	41.0	39.0
	Very low	11.1	8.5	9.8
Level of tourists desire to revisit the park	Low	23.9	15.3	19.7
	Moderate	39.7	55.8	47.5
	High	19.0	15.3	17.3
	Very high	6.3	5.1	5.7
Level of satisfaction with current visit to the park	Strong dissatisfaction	-	-	-
	Dissatisfaction	1.0	5.0	3.0
	Neutral	20.0	35.0	27.5
	Satisfaction	59.0	43.0	51.0
	Strong satisfaction	20.0	17.0	18.5

Table 2. Factors influencing tourists' revisits to Mu Ko Surin National Park.

Variable	Foreign tourist respondents				Thai tourist respondents				Both						
	B	S.E.	Wald	Sig	Exp(B)	B	S.E.	Wald	Sig	Exp(B)	B	S.E.	Wald	Sig	Exp(B)
Constant	-4.451	2.098	4.499	0.034*	0.012	0.858	2.813	0.093	0.760	2.358	-1.039	1.169	0.791	0.374	0.354
Tourists' perceptions:															
•Scenic beauty and pristine park	2.986	0.807	13.678	0.000**	19.813	-	-	-	-	-	0.475	0.215	4.907	0.027*	1.609
•Park's outstanding snorkelling sites	-	-	-	-	-	3.154	0.816	14.948	0.000**	23.436	-	-	-	-	-
Tourists' observation:															
•Unmanaged wastes impacts on tourism experience	-6.008	2.015	8.889	0.003**	0.002	-	-	-	-	-	-	-	-	-	-
•Coral bleaching negatively impacts on tourism experience	-	-	-	-	-	-6.095	2.159	7.970	0.003**	0.002	-3.281	0.967	11.506	0.001**	0.038
Tourists' satisfaction	2.466	0.919	7.192	0.007**	11.769	1.813	0.639	8.061	0.005**	6.130	1.898	0.346	30.106	0.000**	6.672
Diagnostics:															
-2 Log likelihood					46.043				162.260						
Cox & Snell R-square					0.576				0.409						
Nagelkerke R-square					0.786				0.555						
Percentage correct					88.0%				61.0%						
Chi-square					X ² = 85.748, df = 9, p = 0.000				X ² = 105.239, df = 10, p = 0.000						

Note: *p<0.05, **p<0.01.

perception about the scenic beauty, tourists' observation on impacts of unmanaged wastes and tourists' satisfaction when visiting the area.

Tourists' perception about scenic beauty and satisfaction has a positive effect on foreign-respondents' revisit, while tourists' observation of impacts of unmanaged wastes has a negative effect on foreign-respondents' intention to revisit the park. Furthermore, the list of odds ratio for each unit increase on the independent variables shows that the odds ratio of the variable on tourists' observation of the impacts of unmanaged wastes could imply that if tourists observed more unmanaged wastes, then revisit would possibly not occur (Exp (B) = 0.002). However, the value of odds ratio for tourists' perception about scenic beauty (Exp (B) = 19.813) and satisfaction (Exp (B) = 11.769) illustrated that tourists would revisit at chances of 19.813 and 11.769 times, respectively, based on their perceptions and levels of satisfaction.

As for the repeat visitations of Thai tourists, the revisit model explained 77.7% of the variability, which could explain the present data well (-2 Log likelihood = 49.571). The percentage correctly predicted was 91% and statistically significant at 0.01 level of confidence. The variables included in the model were the tourists' perceptions that the park has outstanding snorkelling sites, but coral bleaching has also created a negative impact on their tourism experience and level of satisfaction visiting the park. The positive effects of the revisit model for Thai respondents include tourists' perceptions and satisfaction, whereas coral bleaching, which negatively impacts tourism experience, created a negative impact on revisits. The odds ratio indicates that frequency of revisits is more for the perception of tourists that the park has outstanding snorkelling sites. When the perception of Thai tourists is higher, the frequency of revisits is 23.436 times higher (Exp (B) = 23.436). Similarly, the value of odds ratio for tourists' satisfaction (Exp (B) = 6.130) indicates that tourists who have a high level of satisfaction would revisit more than those who experienced a low level of satisfaction, at 6.130 times more frequent.

The main factor that influenced the possibility of revisits by both foreign and Thai tourists combined in MKSNP is the tourists' perceptions about scenic beauty and pristine park, and level of satisfaction. The model explained the present data well as indicated by -2 Log likelihood of 162.260 and explained 55.5% of the variability. Moreover, the overall percentage of cases that were correctly predicted by the model was 61%.

Discussion

Coral reefs have historically been the main attraction of MKSNP and the main reason of tourists' motivation to revisit the park. However, the impacts of climate change, such as increasing sea surface temperature, have led to diminishing value of the corals and ecosystem services of the park, as there have been reports about coral reefs being destroyed due to climate change resulting in coral bleaching since the early 1980s^{9,11,14}. Hoegh-Guldberg¹⁰ projected that significant bleaching of Thai corals could occur around the year 2020 and 2050 when the sea surface temperature is expected to be over the thermal tolerance limit of corals. Such a scenario could lead to bleaching of most corals and coral reefs will not be able to sustain the stress. This problem would both directly and indirectly impact tourism, especially in regard of the coral reefs that had been the main attraction of many ecotourism destinations, including the MKSNP. For example, earlier studies

on mass coral bleaching in 1998 in El Niño of the Philippines concluded that mass coral bleaching led to serious losses in the country's tourism sectors, which had been estimated at US\$ 1.5 million per year⁴. Similarly, in Sri Lanka and Maldives, losses in economic costs were US\$ 2.2 and US\$ 19 million, respectively²⁶. Hence, to prevent similar losses and to facilitate the recovery and rehabilitation of the coral reefs in MKSNP, the Department of National Parks, Wildlife and Plant Conservation of Thailand closed five tourist destinations in MKSNP in 2010. As a consequence, the number of tourists visiting the park had been reduced by almost one-half, as tourists have the greatest adaptive capacity to climate change impacts by substituting the location to visit. Our study also finds that coral reefs are the major attractions for the tourists, especially foreign tourists, and their degradation could impact tourists' revisit. Therefore, the impacts of any adaptation on tourists towards a destination must be considered. Marine protected areas like MKSNP should promote the conservation and recovery of coral reefs, and develop a strategic framework to enable managers to respond effectively to bleaching events and manage tourism resources in the most sustainable way, especially as the sea temperature will continue to rise.

Tourists, both foreign and Thai, perceived that coral reefs have been severely degraded in MKSNP. The finding of this study is inconsistent with that of other studies. Some studies, such as of Gössling *et al.*⁸ and Main¹³, noted that although there was much coral degradation, tourists failed to perceive the degradation. Despite that, there are other factors for tourists to revisit, such as diverse benthic community and other marine species which are of interest to tourists.

This study found that the perceptions of foreign and Thai tourists regarding coral bleaching and marine environments are different. It is worth noting the importance of the different characteristics of tourists, as they have different backgrounds and travel profiles, and such differences often leads to different perceptions. Social, demographic and cultural factors play a significant role in travel behaviour, and what may be perceived as healthy in one culture may be unhealthy in another culture. Moreover, differences in tourist perceptions also exist depending on how information about climate change is derived. Thai tourists received more information about coral bleaching through local media than foreign tourists, which may lead to the different level of perception towards the coral bleaching situation. In addition, scientific skill, knowledge or the experience of a site being visited over time might also affect tourist perceptions to evaluate change. The perception might also be impacted due to the ability of tourists to distinguish between different forms of coral degradation itself, e.g. bleached coral, dead coral, broken coral, covered algae, as it might be more difficult to perceive underwater marine environmental impacts compared to terrestrial ones.

This study has illustrated that coral reefs are the main motivation for foreign and Thai tourists to travel to MKSNP. Although the majority of the respondents considered coral mortality to be very severe and a major problem, more than one-half of the tourists indicate their willingness to return to the park in the future. This is also due to the fact that visitors are satisfied with the tourism activities and services provided in MKSNP. Studies have however shown that past experience of tourists visiting a tourist destination is a strong predictor of revisits in general^{12, 22, 23}. Our study, considering the number of visits of respondents in the past, did

not show any influence on tourists' revisits. We, however, did not relate specifically their past experience with revisits. Instead, this study indicated on-site experience on observed impacts, e.g. waste and coral degradation, which might influence tourists' revisit.

According to a study conducted by Rittichainuwat *et al.*¹⁸ in urban Bangkok, there was significant correlation between prior travel motivation and tourists' revisits, but our study did not find such correlation, probably due to the different nature of tourist destination and tourist types. Instead, our finding confirms the earlier findings of Petrick *et al.*¹⁷ that the high level of satisfaction of visitors could influence the possibility of tourists' revisits in the same destination. The different factors that affect the repeat visitation of foreign and Thai tourists were their perceptions and observations of the impacts, and the impact of coral bleaching on tourism experience.

Foreign tourists were found to be more concerned with pollution due to wastes than coral bleaching; thus, waste pollution has a negative impact on foreign tourists' revisits. Although foreign tourists perceived the tourist destinations affected by coral bleaching with very high severity, their perceptions and observations of coral bleaching are not the main factors that influenced their chances of repeated visitations to the tourism destination. The foreign tourists believed that the MKSNP environment was still pristine, and such perception was their motivation to travel again to the destination.

As for Thai tourists, they believe that MKSNP is still the best destination for snorkelling which led to their repeated visitations. However, damaged corals and degraded coral reefs remain the main factors that impact their recreational experience, leading to a negative effect on their insights of repeated visitations. This study found that local tourists felt that marine environment has severely degraded and such experience negatively influence the choice of destination and thus decreased revisits. Furthermore, the level of satisfaction has actually influenced the possibilities of revisits by both foreign and Thai tourists. Thus, even though foreign and Thai tourists have different perceptions on revisits, tourists' satisfaction remains the best factor to evaluate the possibilities of repeated visitations.

Although the perception of coral bleaching does not directly influence tourists' revisits, coral bleaching impacts their tourism experience. This study confirms earlier findings that the perception of environmental impacts and degradation can influence the quality of the visitors' experiences, while visitors appear to be more sensitive to the impacts⁵. In particular, coral degradation leads to change in recreation experience. This is in line with the findings of Sangchoey and Tanakanjana²⁰, that perception of the environmental impact is correlated with recreation experiential change. This study also confirms that the perception of on-site experience of visitors, such as clear evidence of waste pollution compared to coral bleaching, influences repeated visitations more than other characteristics, such as demographic profile, past experience and travel motivation.

Even though coral bleaching is among the main impacts mentioned by tourists, other environmental impacts, particularly waste disposal, has influenced non-repeat visitations of tourists. Therefore, such factors can be used as a guide for national park managers in the sustainable and efficient management of wastes accumulated in parks and other related tourist destinations. Furthermore, in order to provide quality tourism experiences, coral

bleaching awareness programmes and environmental education should be conducted to provide more information about coral bleaching and the status of coral reefs that corresponds with tourists' expectations. Although tourists' revisits could be a successful tourism marketing strategy, all stakeholders should understand that taking part in the recovery and conservation of coral reefs is still the most important contribution that everyone can offer for a healthy ecosystem.

It is clear that there are many factors influencing tourist's likelihood to revisit a tourist destination and it also depends on tourist category as demonstrated in this study that different factors influenced the revisitation of Thai and foreign tourists. However, it remains unclear how nationality, scientific knowledge and diving experience in other destinations have an influence on travel behaviour in terms of visiting tourist destinations affected by climate change, such as MKSNP. Overall, the study indicates that coral degradation from climate change impacts has a high complexity on the travel behaviour; and although coral bleaching is not a direct factor in tourist revisitation, it does impact tourists' experience.

Conclusions

Mu Ko Surin Marine National Park is an important nature-based tourism destination for both Thai and foreign tourists, despite inconvenient access compared to other tourist destinations in Thailand. Coral reefs are the main motivation for visiting the park. The study indicates that, although coral reefs have been degraded by coral bleaching, tourists still believe that MKSNP has great diversity and outstanding snorkelling sites. There were some differences between Thai and foreign tourists in their perception of coral degradation. Foreign tourists perceived that this park still has many beautiful fish and other species. On the other hand, Thai tourists very strongly perceived that coral reefs have been severely degraded. Despite coral degradation having a negative influence on marine tourism experiences of both foreign and Thai tourists, more than half of tourists would like to revisit the Park due to their overall satisfaction with the current visit.

Overall, the three factors influencing foreign visitors' likelihood to revisit were the tourists' perception of the scenic beauty, observation of unmanaged wastes, and overall satisfaction. As for Thai respondents, tourists' perceptions that the park has outstanding snorkelling sites, coral bleaching impact on tourism experience, and satisfaction, were the major factors influencing Thai tourists' likelihood to revisit. Based on these findings, it is suggested that park management should promote the rehabilitation, conservation and management of coral reefs and develop a strategic framework to enable managers to respond effectively to bleaching events, including maintaining coral reef ecosystem integrity and health, through reducing non-climate stressors, to allow ecosystems every chance of survival when acute bleaching events happen, or if the climate shift becomes more chronic.

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