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Research Article

Coastal Tourism Business Resilience in Coping with Crisis in Sabah, Malaysia

Jennifer Kim Lian Chan[1]* and Arif Kamisan Pusiran[2]

Abstract

This paper examines the level of tourism business resilience and factors influencing the resilience as well as suggestions in enhancing tourism business resilience by the small and medium coastal tourism operators located in Sabah coastal region, Malaysia. A quantitative approach was employed by using questionnaires and supported by semi-sturctured interviews with 61 small and medium coastal tourism operators in Sabah. Findings show majority of tourism business operators generally have high perceived levels of resilience and acknowledge the importance of resilience in coping with crisis. Ownership of the businesses to ensure sustainability of the business, vast experience within the industry which leads to maintaining of its confidence and being well prepared, as well as location and its readiness to face any crisis, attributed to the business resilience. Suggestions to enhance the level of resilience include: sufficient financial resources for emergencies, development of effective contingency plans, diversification of businesses and products, relocation to new location, government and local community support, as well as the strengthening of safety measures. The findings provide in depth understanding of small and medium size, coastal tourism business resilience and subsequently its benefits to the government and tourism industry in terms of strengthening coastal business resilience in coping with crisis and disaster planning. It is also especially important in terms of providing relevant and sound approaches and strategies, that would enable the development of resilience training to guide coastal tourism businesses in other coastal locations.

Keywords

Small and medium coastal tourism business; Tourism resilience; Level of tourism business resilience; Factors in tourism business resilience; Sabah

Introduction

Tourism is an important economic activity for local economies worldwide. It is a fragile industry and highly susceptible to a wide range of disasters and crises [1]. Tourist destination is a complex social system that operates within a micro and macro environment. It consists of individuals, range of product offerings and natural resources that combine to form a total experience of the area. Tourism destination is prone to an array of possible disasters and crises resulting from both nature and man-made activities [2]; in particular the coastal tourist destination is vulnerable to the impacts of disaster or crisis.

Worldwide, tourist destinations are increasingly and constantly faced with disasters and crises resulting from natural disasters due to climate change as well as man-made disasters which are related to political, social, environmental and economic crises. These disasters and crises pose great challenges to local tourism business operators and have immediate negative effects on the destination. Hence, business resilience is vital to ensure sustainability of local tourism businesses. Crisis and disaster planning are pertinent to tourism, whereby the success of tourist investments depend on being able to provide safe and secure destinations. This is supported by Biggs [3], who highlighted the increasing importance of understanding resilience and applying resilience to tourism systems. Recognizing that the tourism and hospitality industry is one of the most vulnerable industries for both man-made and natural disasters, tourism and hospitality operators have paid great attention in seeking ways to cope with potential disasters that they may face, so as to minimize their losses [4]. Gaining better understanding of crises and disasters and its potential impacts can help in the development of strategies by the tourism business operators in dealing with such incidents.

Tourism destination and businesses are considerably vulnerable to natural disaster [5,6]; and given tourists are sensitive to the safety and security as well as the negative impacts from crisis and disaster; it is vital to rebuild the tourist confidence and reverse the negative perception of the public in the affected areas. Literature records extensive research on tourism resilience in various scopes [7-9], for example, conceptualizing resilience theoretically [10], ecological/environmental resilience of tourism systems by Becken [11], resilience of tourism enterprises [12], assessing and planning resilience in tourism [5] and building resilience in unpredictable business environments [13], Gheytanchi et al. [14] identified the major failure in dealing with disaster and emergencies, and Faulker [15] commented on the limited research on crisis or disaster, as well as the response of the tourism industry. Review of literature has shown that scant attention has been given to the perceived level of business resilience and strategic approaches undertaken in coping with crisis, especially among the small and medium businesses within the tourism sector, that are located within the coastal region. It argues that an insightful understanding of how these business operators respond to crisis and the level of resilience, as well as the approaches employed to build resilience in different coastal locations within their business environment, and finding new direction in order to enhance the resilience, and thus finding ways to control the crisis, is vital.

Review of Tourism Resilience

Resilience has become an important concept in the tourism industry [12] and an important area of research; simply because there has been an increased rate of disasters or crises in tourist destinations; and tourist destinations in general are prone to crisis or disaster, especially those located in coastal regions. Tyrell and Johnston [16] defined resilience as "the ability of social, economic or ecological systems to recover from tourism induced stress." On the other hand, Luthe and Wyss [5] stated that the resilience of the tourism system is linked with the social-economics-ecological system. Accordingly,

*Corresponding author: Jennifer Kim Lian Chan, Researcher of Borneo Tourism Research Center, Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah, Malaysia, E-mail: jkimchan@yahoo.co.uk; jenniferchan@ums.edu.my

resilience is "the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events or the ability of a system to maintain its identity [17]. While, Biggs et al. [12] defined resilience of the tourism enterprise as "one that is able to remain in a stable state, maintaining or growing its income and employee numbers despite disturbance". Hence, resilience means the ability to anticipate disasters and better planning to reduce disaster losses or minimize the negative consequences. Literature records of resilience can be categorized in two dimensions, namely planned resilience-the use of existing predetermined planning and capabilities; while adaptive resilience means developing new capabilities during the post-disaster phase [18].

Likewise, resilience of tourism organizations have become an emerging area of research [19,20]; and in the same vein, organizational resilience is recognized as an important concept in disaster management [21]. Organizational resilience means the capacity of the organization to adapt to disturbance and seize opportunities emerging from the changes within the environment [22]. Accordingly, business resilience can be described in three different ways, namely, survival, adaption and innovation [13,23]. On the other hand, financial capital, social capital and lifestyle benefits are commonly used to measure resilience in tourism businesses [12]. Likewise, Xu and Grunewald [24] stated that flexible and effective resource management which included financial, human and image, stakeholder collaboration, disaster communication and specific roles of the government, formed proactive strategies which lead to business resilience in coping with crisis.

Study Site: Sabah Coastal Region

Coastal tourism consists of a wide range of tourism, leisure and recreational activities. Hall [25] acknowledged that coastal tourism is widely regarded as one of the fastest growing areas of contemporary tourism. The growth of tourism in coastal areas and its economic importance is unquestionable [26]. The development of coastal tourism businesses and resorts in Sabah, Malaysia has been increasing over the last decade; and these tourism businesses have been perceived as important tourist attractions to lure tourists to Sabah. In recent years, the coastal region of Sabah has been regularly and negatively affected by a series of crises which have impacted negatively on coastal tourism businesses. Due to continuously significant threats posed and

the geographical location between the Philippines and Indonesia, coupled with an extensive coastal border, as well as numerous off-shore islands which make it ideal for the covert travelling of intruders, northern and eastern coastal regions have been gazetted as Eastern Sabah Security Zone (ESSZone-a security zone that consists of 10 coastal districts namely: Kudat, Kota Marudu, Pitas, Beluran, Sandakan, Kinabatangan, Lahad Datu, Kunak, Semporna and Tawau) as presented in Figure 1.

Over the years, the coastal region of Sabah has faced several high risk incidents and crisis events that have taken place along the Sabah coastal region. In 2000, the Sipadan Island kidnapping case painted a negative image of the Malaysian tourism industry. 21 hostages including 10 tourists from Europe and the Middle East, as well as 11 workers were taken to the Abu Sayyaf base in Jolo, Sulu. The repeated kidnapping cases further portrayed a negative image of the Malaysian tourism industry especially Sabah [27]. The incidents continued in February 2013 whereby militant intruders in Lahad Datu who were also known as the Royal Army of Sulu Sultanate claimed that Sabah belonged to them and killed Malaysian armies and policemen. Due to this incident, several foreign countries, such as China, Canada, Australia and New Zealand have advised their citizens to avoid coming to Sabah. This resulted in sharp declines in international tourist arrivals throughout South East Asia and threatened the sustainability of coastal tourism businesses and destinations. Based on the state's tourist arrival statistics on the Sabah Tourism website, the state saw the lowest number of foreign tourists in February, March and April 2013 during the intrusion. Another disastrous kidnapping incident took place again in November 2013 where armed men raided three of the five water villas at Pom Pom Island. The most recent kidnapping case involving tourist in Semporna was on April 2, 2014 whereby Abu Sayyaf kidnapped a Chinese tourist, Gao Huayun, 28, and a Filipino worker, Marcy Dayawan, 40 from Singamata Reed Resort, Semporna. Both were released to Malaysian Security officials on May 30, 2014. These incidents have impacted negatively on small coastal businesses in the area.

In spite of the occurrence of these high risk incidents, there is a scant understanding of the perceived level of resilience and strategic approaches undertaken in coping with the crisis along the Sabah coastal areas. Indeed, these crises present challenges to the tourism industry in Sabah particularly within the coastal area not only because
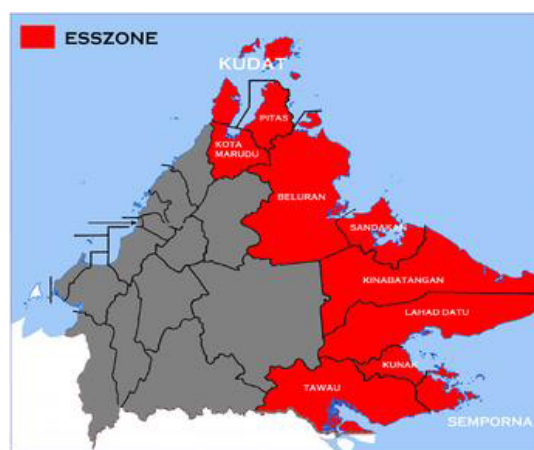

Figure 1: Eastern Sabah Security Zone.
source : https://en.wikipedia.org/wiki/Eastern_Sabah_Security_Zone

of their negative impact on tourist numbers, but also due to tourists' potential positive or negative impact on recovering destinations and tourism related business. Given the paucity of studies on coastal tourism business resilience, this research aimed to seek further understanding of the said issue.

Research Objectives

Hence, the research objectives are to: 1) analyse the level of perceived resilience in coping with crisis by the small and medium coastal tourism businesses; 2) identify factors influencing the adoption of business resilience; 3) discuss ways to enhance business resilience and the approaches and responses to crisis.

Research method

The research employed a quantitative approach using questionnaires involving face-to-face survey and was supported by semi-structured interviews with a total of 61 small and medium coastal tourism businesses located along the coastal area of Sabah. The quantitative survey was to address the perceived level of resilience whilst the semi-structured interviews were to understand the influencing factors and ways to enhance business resilience which required a detailed, clear explanation and description from the respondents. Likewise, the face-to-face survey and interview method were chosen as the instrument for data collection to ensure high response rate, relevant respondents in position to address the research objectives that are rather complex. Sampling framework was based on the list of coastal tourism businesses listed on the Sabah Tourism Board and Local Authorities. Convenience sampling was adopted based on the sample population and data collection was carried out at nine (9) coastal regions as shown in Figure 2. Respondents were senior management staff and owners as well as operations staff. Data collected included perceived level of business resilience, influencing factors, ways to enhance business resilience and approaches undertaken. Semi–structured face-to-face interviews were chosen to collect more authentic and well-rounded data from the voices of the respondents. This technique allowed more flexibility

and the opportunity to explore the complexity of factors influencing the adoption of resilience and suggestions to enhance business resilience. It also enabled the researchers to build a rapport with the respondents through a conversational style which made them feel more comfortable about contributing personal opinions and providing additional information to support the quantitative research. The survey questionnaires consist of profiling of coastal tourism businesses, their perceived level of business resilience in coping with crisis, factors influencing the adoption of business resilience and ways to enhance the level of resilience in coping with crisis.

Field work was conducted in May 2016 to September 2017 and interview appointments were scheduled through phone calls and followed up with letters. Interviews were held at the respective coastal tourism business premises. Each survey and interview began with an introduction of the researchers and the research project, followed by the right to withdraw from the interview. Each respondent had spent 45 to 60 min and interviews were recorded using a tape recorder with prior permission from the respondents.

Quantitative data was analyzed using descriptive analysis that involved percentage and mean**.** The interview audio tapes were transcribed verbatim prior to this, in order to ensure the authenticity and richness of data. The conceptual-driven data was analysed using qualitative analysis techniques. Transcribed interviews were read and reread carefully to familiarise the researchers with its contents, and to 'immerse' them in the collected data until a set of comprehensive categories and themes emerged. The coding unit was mostly based on a single phrase or several significant statements that generated themes related to the research objectives.

Findings

Respondent profile

A total of 61 small and medium sized coastal tourism business operators located in 9 districts along the Sabah coastal region were involved in the survey and interviews as shown in Figure 2 below. Majority
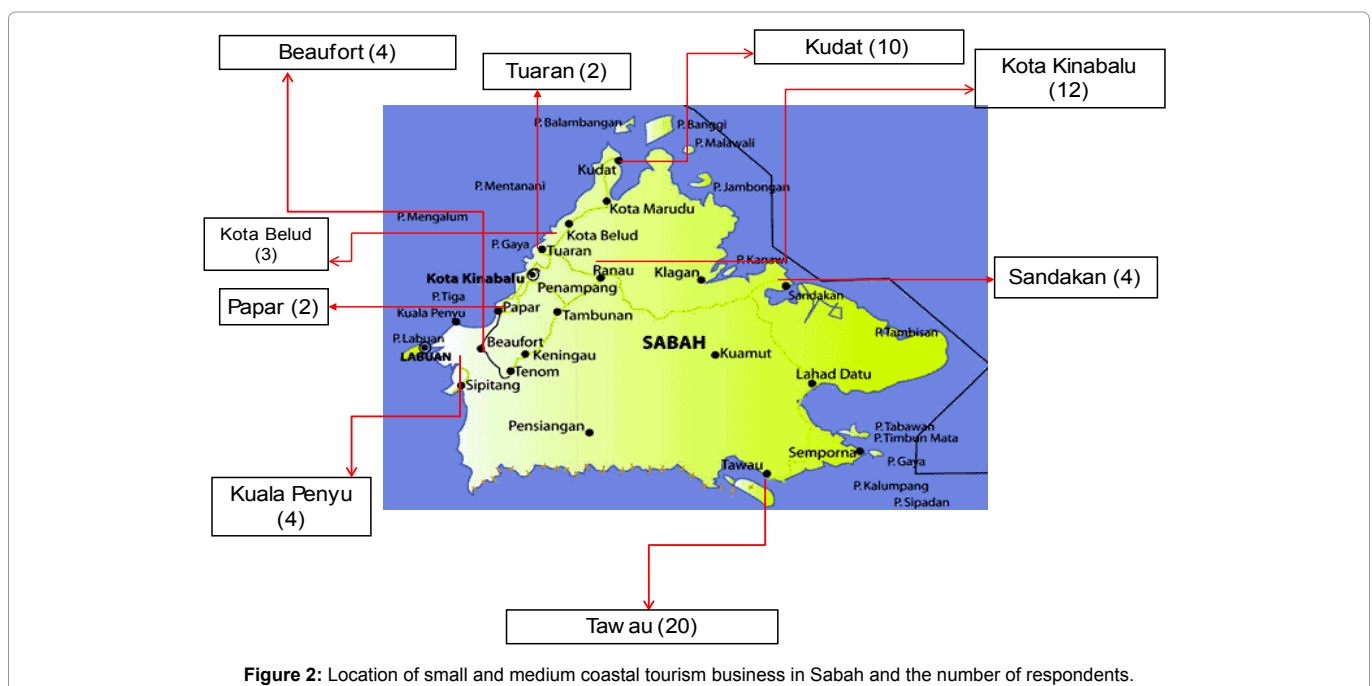

Figure 2: Location of small and medium coastal tourism business in Sabah and the number of respondents.

Table 1: Profile of respondents.

Demographic data

	No. of respondents
Gender	
Male	39
Female	22
Origin	
Local	53
Peninsular	4
Others	4
Education	
Primary School	5
Secondary School	12
Diploma	19
Degree	24
Others	1
Experience in Tourism Industry	
Less than 3 years	4
3-5 years	11
6-10 years	20
11-20 years	14
More than 20 years	12
Current Position	
Owner	13
CEO/Managing Director	2
General Manager	4
Operator	3
Operations Manager	15
Marketing/Sales Manager	13
Regional/Area Manager	7
Other	4
Type of Business	
Accommodation (Hotel/Resort)	40
Activity/Attraction Operations	17
Transportation	4
No.of employee	
Less than 5 employees	5
5-20 employees	29
21-50 employees	15
50-100 employees	4
More than 100 employees	8
Years of running business	
1-2 years	4
3-5 years	8
6-10 years	23
11 years or more	26
TOTAL	**61**

of the respondents have been in the tourism business for more than 5 years, and possessed tertiary education level. Majority of the tourism businesses are owned by the local people.

Perceived level of tourism business resilience in coping with crisis

The tourism business operators located along Sabah coastal areas were asked to indicate their level of resilience in coping with crisis. The quantitative empirical evidence revealed the different levels of perceived resilience responded by the coastal tourism business operators as reported in the Table 2. The mean value of perceived level of resilience ranged from 2.75 to 5.0 by the tourism business operators located at nine different locations, namely: Beaufort, Kuala Penyu, Papar, Kota Belud, Kudat, Kota Kinabalu, Tuaran, Sandakan, and Tawau. These are presented in Table 3. In general, there is a high perceived level of resilience by the tourism business operators located at Tuaran, Tawau, Kota Kinabalu, Kota Belud, Kudat and Sandakan (these locations are considered as security zones) as compared to Beaufort, Kuala Penyu and Papar. In short, Beaufort, Kuala Penyu and Papar are deemed destinations with low levels of risks and face little crisis as compared to other coastal destinations within the Eastern region of Sabah.

The respondents were asked to rate their perceived level of resilience in coping with crisis in terms of "low, moderate, high and very high". The quantitative results revealed that only 11.7% rated low levels of resilience, while 30 percent rated moderate levels of resilience, whereas 58.3% rated high and very high levels of resilience; and one respondent did not respond.

Based on the findings, it can be concluded that majority of tourism business operators are aware and have high perceived levels of resilience in coping with crisis. Simply put, their businesses which are located at close proximity to coastal areas, are easily exposed to and affected by a range of crises at the respective locations; as recorded in the past, the negative incidents-kidnapping, shooting, pollution and fire; and also external factors such as world economic crisis and aircraft crash (MH 370). Majority of the businesses adapted to the crisis; and most of the coastal tourism businesses responded with high levels of perceived resilience. Consequently, they were able to adjust their business operations, management and marketing strategies accordingly, and within the context of coping with crisis in order to sustain their business. These are evident from the interview responses: "support by top management with sufficient finance and to improve the existing facilities accordingly. (SS5AM1); "to diversify our tour programs and increase security measures in our coastal business operations." (SS4OP2); "…we have made changes accordingly and adjusted our operations for guest safety purposes."

Table 2: Perceived level of resilience at different coastal locations in sabah.

Coast Region	Mean-Perceived Level of Resilience	Location/Crises Level
Beaufort	2.75	West coast/low frequency disaster/crisis
Kuala Penyu	2.75	West coast/low frequency disaster/crisis
Papar	2.75	West coast/low frequency disaster/crisis
Kudat	3.5	West coast/ESSzone/
Kota Belud	3.7	West coast/low frequency disaster/crisis
Kota Kinabalu	4.75	West coast/low frequency disaster/crisis
Tuaran	5.0	West coast/low crisis level
Sandakan	3.2	East coast/ESSzone high-consequence natural disaster and crisis
Tawau	4.24	East coast/ESS zone high-consequence natural disaster and crisis

Table 3: Percentage of level of resilience.

	Frequency	Percent
Low	7	11.7
Moderate	18	30.0
High	17	28.3
Very High	18	30.0
Total	60	100.0

(SS1MS1); "we move our tourism business to new location and diversify our tourism products to reduce the crisis." (SSAM1)

Interestingly, it was found that majority of the respondents indicated that they did not include crisis management as part of the business organization statement of purpose, but they did consider crisis management as part of their strategic business management program; furthermore, some of them set up crisis management advisory committees.

On other hand, there are several small coastal tourism businesses who responded that they had "never" or did nothing about the resilience in coping with crisis. Simply put, these respondents have limited knowledge of crisis management and the size of their business operation did not encourage them to prepare for any crisis, especially with regards to the financial aspect. This finding corresponds well with the study by Spillan and Hough [28] whereby crisis management planning receives little attention from the small businesses; and consistent with findings from the study on the hotel industry by AlBattat and Som [4] who stated that financial resources and small size are the barriers to the preparation for crisis. Likewise, most of the small businesses have experienced crisis events but they do not have crisis management and crisis management teams.

The factors influencing the resilience of tourism business in Sabah coastal destination

The results from the study showed that among the strong factors influencing the resilient tourism business within Sabah coastal destinations are ownership of the businesses, experience in the industry and the strength of the location or coastal destination. Apart from that, business networking has been identified as one of the factors that keep the businesses staying resilient in the industry. However, this factor has applied only to the big players in the industry as their networking is better established as compared to the new players.

Ownership of the business could be the strongest reason to be resilient in the business as the owner will try very hard to ensure the sustainability of their business.

This was evident from the response: "we own the business and have been operating for more than 11 years and we have to build our confidence and strengthen the safety measures (SS1MS1); "we are financially stable and thus ensured that our business will not be affected significantly by the crisis" (SS3OP1).

Hence, having vast experience in the business will make the business operators more confident and ready to face any grueling situations. They were more prepared towards crisis as compared to those who did not have contingency plans or planning. The evidence from the responses: "we have experienced the crisis before and we learnt from our experiences… (SS2OP1); "We experienced high tide before, the sea water reached to our resort compound and then we put the sandbag to prevent the same incident does not happened again (TS3OP2).

The strength of the location of coastal destination influenced the level of business resilience, as evidence from the response: "being in the security zone, we anticipate government has good safety plan and support" (SS5AM1); "there is an increase in security measures by the government within the security zone, effective preventions and planning way ahead, so this is good for this coastal location" (SS1MS!).

The results from the study also indicate that the readiness among the employees in facing the crisis could help to overcome any serious situations especially during the critical events. This is shown from the responses of the tour operators:

- "After the previous kidnapping, we learnt that such incidents can jeopardize not only the safety of our in-house guest and staff, it also gives huge impact to the business" (SPR8)

- "We do routine check at the resort and ensure effective prevention" (KKSR1)

- "Ready for the possibility of natural disaster as we are near the coastal line" (KSROP1)

- "Better coordination between staff and business and providing training as well as monitor changes"

- "Prepare and review SOP and develop new contingency plans now" (BROP4)

- Thus, this finding shows that when the respondents have the experience in handling the crises, they are more prepared and ready when the disaster happens.

- Logistically, the business within a strategic location will have an advantage in terms of business operations. Hence, when the business in the Sabah coastal area that is close to the city, such as in the West Coast area, there is more preparation towards disasters and crises as compared to those areas in Tawau and Sandakan. However, in terms of their resilience, they are more resilient compared to those within the West Coast area. This is because the area is exposed to terrorism and kidnapping as compared to those in the West Coast area.

Suggestions to enhance tourism business resilience

The coastal tourism business operators have responded with several suggestions to enhance the level of resilience in tourism business operations. These are presented in Table 4.

Based on the responses, ways of enhancing the level of resilience can be categorized as financial resources, crisis/contingency plan, diversify business and products and relocation of business, government and local community support and strengthen safety measures as well as build confidence. It seems to suggest that in the context of coastal tourism business resilience, financial resource is regarded as the pertinent aspect in strengthening resilience levels; and this is consistent with the findings of McCool [2].

In short, in order to enhance the level of resilience, reliable communication systems, equipment and information from media and social media are pertinent aside from good monitoring and surveillance efforts. The support from government and local community pay equal importance just like authorities to enhance level of preparedness as documented in the study by McCool [2] and Luthe and Wyss [5].

Interestingly, there is little mention on the needs of training

Table 4: Ways to enhance tourism business resilience in different coastal regions in sabah.

Locations	Ways to enhance tourism business resilience
Beaufort	- Increase and diversify program or tours - "Monetary value" created on tourism product and to improve the existing facilities
Kuala Penyu	- Contingency plan for business
Papar	- Allocate special fund for emergency - Diversify product and venture to other tourism products.
Kudat	- Allocate finance support - Prepare/conduct other business resources - Identify the problematic area or source
Kota Belud	- Monitoring any issue and problem particularly environmental quality
Kota Kinabalu	- Move to a new site - Also need support from government and local community
Tuaran	- Support from local government
Sandakan	- Allocate finance support - Prepare/conduct other business resources - Identify the problematic area or source.
Tawau	- We have to build our confidence on the government effort to strengthen the safety measure. If we don't have the confidence, how can we explain to the guests. - Anticipate well or come up with a well-studied plan

related security measures or handling crisis from the tourism business operators. Furthermore, it is unclear to what extend are these tourism business operators familiar with and have the knowledge with regards to the types of crisis faced, and whether they are equipped with relevant skills to handle crisis that may affect their business operations.

Conclusion

The coastal region of Sabah is prone to different types of natural and man-made disasters/crisis. In particular, the Eastern coastal area of Sabah, Malaysia is faced with numerous severe or high risk crises which has led it to be gazette as a security zone. The research finding has addressed an important gap in small and medium size tourism business resilience by providing deeper understanding in the perceived levels of resilience and its key attributes of resilience, ways of enhancing coastal tourism business resilience as well as strategic approaches in coping with crisis. Clearly, diverse factors can strengthen the resilience of coastal tourism businesses as it is being affected by socio-political and economic disturbances such as security and health concerns, economics recessions and regulatory environment. The findings provide a crucial advance in the understanding of the relationship between coastal tourism business resilience and the broader economic, social, environmental and ecological systems in which coastal tourism businesses depend upon.

Building resilience minimizes the effects of future disaster events on coastal tourism business communities, economy and environment. It also means efficiently and effectively coping with the impacts of disasters in the future. Clearly, having high levels of perceived preparedness and business resilience, as well as being equipped with updated crisis management plans with tourism business managers' awareness, help to provide necessary resources and effective training to avoid or minimize risks. Above all, safety surveillance and security systems, emergency planning and disaster management, and the need for better cooperation, coordination and awareness efforts amongst the coastal destination stakeholders, government agencies and local communities could mitigate the negative impacts.

Majority of the respondents indicated remarkably high levels of resilience. However, the findings also revealed that a small number of tourism businesses pay little attention to the preparedness and resilience, due to financial constraints. It is perceived that reactive strategies consist of disaster communications; resource management and stakeholder collaboration are deemed significant within the context of Sabah coastal region. The findings provide academicians and tourism practitioners with comprehensive knowledge about coastal tourism business resilience in terms of perceived levels of resilience, key attributes and ways to improve business resilience. The research limitations include: that data collection was solely focused on the management and operations staffs. Other stakeholders such as relevant government agencies and local communities were excluded. It suggests future comparison research work on different coastal locations and tourism organizations of various sizes, as well as to identify the significant factors attributing to business resilience using the quantitative approach.

References

1. Maditinos Z, Vassiliadis C (2008) Crises and Disasters in Tourism Industry: Happen locally-Affect globally. E-Book 67-76.

2. McCool BN (2012) The Needs to be Prepared: Disaster Management in the Hospitality Industry. J Bus Hotel Manage 1-5.

3. Biggs D (2011) Understanding resilience in a vulnerable industry: the case of Reef Tourism in Australia. Ecology and Society 16: 30.

4. AlBattat A, Som AFM (2014) Disaster Preparedness of Hotel Industry Abroad: A comparative Analysis. SHS Web Of Conference, EDP Science.

5. Luthe T, Wyss R (2014) Assessing and planning resilience in tourism. Tourism Manag 44: 161-163.

6. Council of Australian Governments (2009) National Partnership Agreement on Natural Disaster Resilience.

7. Hall CM (2010) Crisis events in tourism: Subjects of crisis in tourism. Current Issues in Tourism 13: 401-417.

8. Pfoor C (2009) Crisis management in the tourism industry: a review of emergency literature. In C. Pforr and P. Hosie (Eds.) Crisis management in the tourism industry: Beating the odds? Pp 37-62. Farnham, England: Ashgate Publishing.

9. Ritchie B (2008) Tourism disaster planning and management: From response and recovery to reduction and readiness. Curr Iss Tourism 11: 315-348.

10. Munro JKS, Allison HE, Moore SA (2010) Using resilience concepts to

investigate the impacts of protected area tourism on communities. Annals Tourism Res 37: 499-519.

11. Becken S (2013) Developing a framework for assessing resilience of tourism subsystem to climatic factors. Annals Tourism Res 43: 506-528.

12. Biggs D, Hall CM, Stoeckl N (2015) The resilience of formal and informal tourism enterprises to disasters: Reef tourism in Phuket, Thailand. J Sustainable Tourism 20: 645-665.

13. Dahles H, Susilowati TP (2015) Business resilience in times of grwoth and crisis. Annals Tourism Res 51: 34-50.

14. Gheytanchi A, Joseph L, Gierlach E, Kimpara S, Housley J (2007) The dirty dozen: Twelve failures of the Hurricane Katrina responses and how psychology can help. Am Psychol 62: 118-130.

15. Faulker B (2001) Towards a framework for tourism disaster management. Tourism Manag 22: 135-147.

16. Tyrell TJ, Johnston RJ (2008) Tourism sustainability, resiliency and dynamics: Towards a more comprehensive perspectives. Tourism Hospitality Res 8: 14-24.

17. Holling CS (1973) Resilience and stability of ecological systems. Annals Rev Ecol System 1-23.

18. Lee AV, Vargo J, Seville E (2013) Developing a Tool to Measure and Compare organizations' resilience. Nat Hazards Rev 14: 29-41.

19. Orchiston C, Prayag G, Brown C (2016) Organizational resilience in the tourism sector, research note. Annals Tourism Res 56: 128-163.

20. Orchiston C (2012) Tourism business preparedness, resilience and disaster planning in a region of high seismic risk: The case of the Southern Alps, New Zealand. Curr Iss Tourism 1-18.

21. McManus S, Seville E, Vargo J, Brunsdon D (2008) Facilitated process for improving organizational resilience. Nat Hazards Rev 9: 81-90.

22. Smit B, Wandel J (2006) Adaptation, adaptive capacity and vulnerability. Glob Environ Change 16: 282-292.

23. Scott N, Law E (2006) Tourism crisis and disaster: enhancing understanding of system effects. J Travel Tourism Mark 19: 149-158.

24. Xu J, Grunewald A (2009) What have We Learned? A Critical review of Tourism Disaster Management. J China Tourism Res 591: 102-103.

25. Hall M (2001) Trends in ocean and coastal tourism: end of the last frontier? J Ocean Coastal Manag 44: 601-618.

26. UNEP (2009) Sustainable Coastal Tourism-An integrared planning and management approach.

27. Ayob MA, Masron T (2014) Issues of safety and Security: New Challenging to Malaysia Tourism Industry.

28. Spillan J, Hough M (2003) Crisis Planning in Small Businesses: Importance, Impetus and Indifference. Eur Manage J 21: 398-407.

Author Affiliation

[1]*Borneo Tourism Research Centre, Faculty of Business, Economics and Accountancy, University Malaysia Sabah, Malaysia*

[2]*Economics and Accountancy, University Malaysia Sabah, Malaysia*

Top