

EVENT MANAGEMENT BODY OF KNOWLEDGE MODEL AND RISK  
MANAGEMENT IN MALAYSIAN SMALL ADVENTURE TOURISM  
BUSINESS

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BUSINESS

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## **DEDICATION**

**“Travel brings power and love back into your life”**

- Rumi -

**To my beloved family and most special person in my life,**

**“Mom, Dad, Siblings, Nieces, Nephews and KJ”**

Thank you for your endless love, prayers, encouragement, and sacrifices.

## ACKNOWLEDGEMENT

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Meeting the entrepreneurs and staff of the four adventure operators was naturally a high point of this study. I am most grateful for the great experience, hundred knowledge, and best hospitality I got from them.

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## **ABSTRACT**

Risk is inherent in adventure tourism. Without risk, adventure tourism will lose its excitement and uniqueness. Therefore, managing risk in commercial adventure tourism operations is essential for the safety of travellers. Moreover, improper risk management in adventure tourism businesses may lead to adverse issues such as injuries and accidents. Media frequently highlight the risks involved in adventure tourism after a reported fatal accident. Since 2000, almost four million injuries in adventure tourism have been reported. This situation may cause significant effects and harmful impacts on related businesses and the whole tourism industry. Thus, it is vital for adventure tourism businesses to have an effective tool and model for managing risks effectively to maintain a high reputation and confidence of customers. This study explores whether Malaysian adventure tourism businesses adhere to risk management guidelines or prescribed models. The multiple case study approach was used throughout this study to achieve all its research objectives. The findings from three case studies revealed that the businesses have carried out several risk management practices. However, there is still no reference to specific risk management models that adventure tourism businesses may benchmark. Therefore, this study has proposed the Event Management Body of Knowledge (EMBOK) model to enhance risk management practices in Malaysian small adventure tourism businesses. This may reduce injury risk and promote Malaysia's safe adventure tourism environment.

## ABSTRAK

Risiko wujud dalam pelancongan pengembaraan. Tanpa risiko, pelancongan pengembaraan akan kehilangan keseronokan dan keunikannya. Oleh itu, pengurusan risiko dalam operasi pelancongan pengembaraan komersil adalah penting untuk keselamatan pengembara. Tambahan lagi, pengurusan risiko yang tidak betul dalam perniagaan pelancongan pengembaraan boleh membawa kepada isu buruk seperti kecederaan dan kemalangan. Media sering menonjolkan risiko yang terlibat dalam pelancongan pengembaraan selepas kemalangan maut dilaporkan. Sejak tahun 2000, hampir empat juta kecederaan dalam pelancongan pengembaraan telah dilaporkan. Keadaan ini boleh menyebabkan kesan yang ketara dan memudaratkan ke atas perniagaan yang berkaitan, serta keseluruhan industri pelancongan. Oleh itu, adalah penting bagi perniagaan pelancongan pengembaraan komersil untuk mempunyai alat dan model yang berkesan dalam mengurus risiko secara berkesan dan mengekalkan reputasi tinggi dan keyakinan pelanggan. Kajian ini meneroka sama ada perniagaan pelancongan pengembaraan Malaysia mematuhi garis panduan pengurusan risiko atau model yang ditetapkan. Pendekatan kajian kes berganda digunakan sepanjang kajian ini untuk mencapai semua objektif kajian. Keputusan daripada tiga kajian kes mendedahkan bahawa perniagaan telah menjalankan beberapa amalan pengurusan risiko. Walau bagaimanapun, masih tiada rujukan kepada model pengurusan risiko khusus yang boleh menjadi penanda aras oleh perniagaan pelancongan pengembaraan. Oleh itu, kajian ini telah mencadangkan model Badan Pengurusan Acara (EMBOK) untuk mempertingkatkan amalan pengurusan risiko dalam perniagaan kecil pelancongan pengembaraan di Malaysia. Ini boleh mengurangkan risiko kecederaan dan menggalakkan keselamatan persekitaran pelancongan pengembaraan di Malaysia.

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## LIST OF ABBREVIATIONS

Covid-19	-	Novel Coronavirus
WHO	-	World Health Organization
U.S	-	United States
MCO	-	Movement Control Order
EMBOK	-	The Event Management Body of Knowledge
ATTA	-	Adventure Travel Trade Association
NGOs	-	Non-Government Organizations
UNWTO	-	World Tourism Organization
GWU	-	The George Washington University
ATDI	-	Adventure Tourism Development Index
IWGATF	-	Working Group of Adventure Tourism Frontier
SSM	-	Companies Commission of Malaysia
ISO	-	The International Organization for Standardization

## LIST OF SYMBOLS

RM	-	Ringgit Malaysia
USD	-	US Dollar
\$	-	Dollar

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Study

To date, countries worldwide are battling with the novel coronavirus (Covid-19) pandemic. Since the World Health Organization (WHO) has declared the Covid-19 as a global pandemic on March 11, 2020, it has changed the entire world due to its outbreak (Shah et al., 2020). The Covid-19 pandemic caused not only a health crisis but also a global economic crisis (Haryanto, 2020; Pak et al., 2020). This outbreak had brought a significant impact on the economic development worldwide (Bakar et al., 2020). Tourism is one of the sectors that is tremendously impacted worldwide. Due to this pandemic, international tourist arrivals worldwide are estimated to drop to 78% in the first quarter of 2020, causing the loss of USD 1.2 trillion in export revenues from tourism (UNWTO, 2020).

Before the pandemic, the tourism industry was one of the most rapidly growing industries in the world and has become a key driver for socio-economic activity to progress globally (Nasir et al., 2020). According to McKay (2013), this industry had become progressively complex and was segmented with the growth of diverse ‘niche’ forms of tourism. Specific segments such as health tourism, ecotourism, business tourism, gastronomy tourism, sports tourism, adventure tourism, and special interest tourism had shown dramatic growth in the global tourism industry. The emerging market of all these niche segments is to cater to the needs of a specific market due to the demands of sophisticated tourists who desire a specific interest as their primary motivation to travel (Sung et al., 1996; Wen et al., 2020a).

In the global tourism industry, adventure tourism was highlighted as one of the most rapid-growing segments (ATTA, 2018; Clinch et al., 2017; Giddy et al., 2018; Janowski et al., 2021; McKay, 2018a; Peacock et al., 2017; UNWTO, 2014; Zainudin

et al., 2020). According to Bentley, Page and Laird (2001), adventure tourism could be defined as a segment that encompasses activities ranging from high-risk to low-risk adventures. Meanwhile, commercially operated outdoor activities will offer a combination of adventure and thrill experiences in a natural setting (Bentley, Page, & Laird, 2001). Commonly, tourists are willing to pay commercial operators a premium price for an exciting, safe, and authentic adventure experience (Khatri, 2018; Senthilkumaran et al., 2017). Therefore, the growth and commercialization of adventure tourism have been compelling over the last 20 years (Buckley et al., 2014).

Adventure tourism has been prioritized by several countries such as Australia, New Zealand, Norway, India, and South Africa as a key driver for their economic development due to its ecological, cultural, and economic values (UNWTO, 2014). According to a market study on global adventure tourism conducted by The Adventure Travel Trade Association (ATTA), the value of worldwide adventure tourism was USD 89 billion in 2010. However, the value dramatically increased by 195% in 2013, making this segment worth USD 263 billion. In 2018 and 2019, this segment was valued globally at USD 583.3 billion and USD 657.8 billion respectively (Allied Market Research, 2019; Statista, 2020) and has become a vibrant segment of economic growth for most global countries with an estimated annual growth of over 15% (Burak, 1999; Naidoo et al., 2015). In addition, the annual increase of global adventure tourism value over the last ten years has provided further evidence of the great demand for this segment in the international tourism industry. This segment has grown more popular among adventurous tourists who persistently seek some degree of physical activity, uniqueness, challenge, relaxation, and emotional excitement from their vacation experience (Williams et al., 2017).

According to Buckley (2007), geographic and climate factors are essential for adventure tourism to flourish. Malaysia is rich with natural resources and is bestowed with many beautiful highlands, attractive islands, and various rivers (Mapjabil et al., 2017). Hence, Malaysia has a substantial potential to tap into the adventure tourism market based on its abundant natural resources which are suitable for adventure activities (Isa et al., 2014; Mapjabil et al., 2017). Indeed, this has made Malaysia an attractive country for travelers worldwide who have special interests in adventure activities. It will allow them to experience all kinds of adventure activities such as

mountain climbing, scuba diving, water rafting, windsurfing, skydiving, jungle trekking, and other adventure activities (Ibrahim et al., 2016). Due to this advantage, adventure tourism has grown increasingly for more than a decade (Isa et al., 2015b) and has become a popular segment in Malaysia's tourism industry (Ibrahim et al., 2016; Yusof et al., 2008). Malaysia has acknowledged adventure tourism as a segment that can enhance the country's tourism yield by listing this segment in the twelve initiatives which are proposed under the tourism National Key Economic Area (NKEA). This segment is considered a niche market in Malaysia.

In 2019, the tourism industry recorded 2.4% growth from the previous year and contributed RM 86.1 billion to Malaysia's revenue (Tourism Malaysia, 2020). The Malaysia Tourism Annual Report 2019 cited that the sports component is worth RM 172.3 million in tourist expenditure. Meanwhile, in the domestic tourism statistics, sport and recreation have been listed as one of the eight primary purposes of the trip by domestic tourists (Figure 1.1). Adventure tourism is connected with travel, sport, and outdoor recreation (Beedie et al., 2003) and has become one of the most dynamic components of outdoor recreation (Hinch et al., 2001; Naidoo et al., 2015). According to Hall (1992), adventure tourism is one of the related areas which is inextricably linked to sports tourism. Adventure tourism can be associated with sports tourism through recreational activities that occur within natural settings. Recreational activities include those that are conducted in the air (e.g. skydiving, paragliding, base jumping), in water (e.g. diving, whitewater rafting, surfing), and on the land (e.g. skiing, abseiling, caving).

Since adventure tourism is one of the main sectors that contribute to the income of Malaysia's tourism industry, this sector should be well organized and managed by all stakeholders. Proper management in this sector is vital to provide a long-term and sustainable future as well as to improve its market share in the tourism industry. Therefore, it is highly relevant to analyze the scope of the adventure tourism businesses on how they organize and manage this business to promote successful growth.

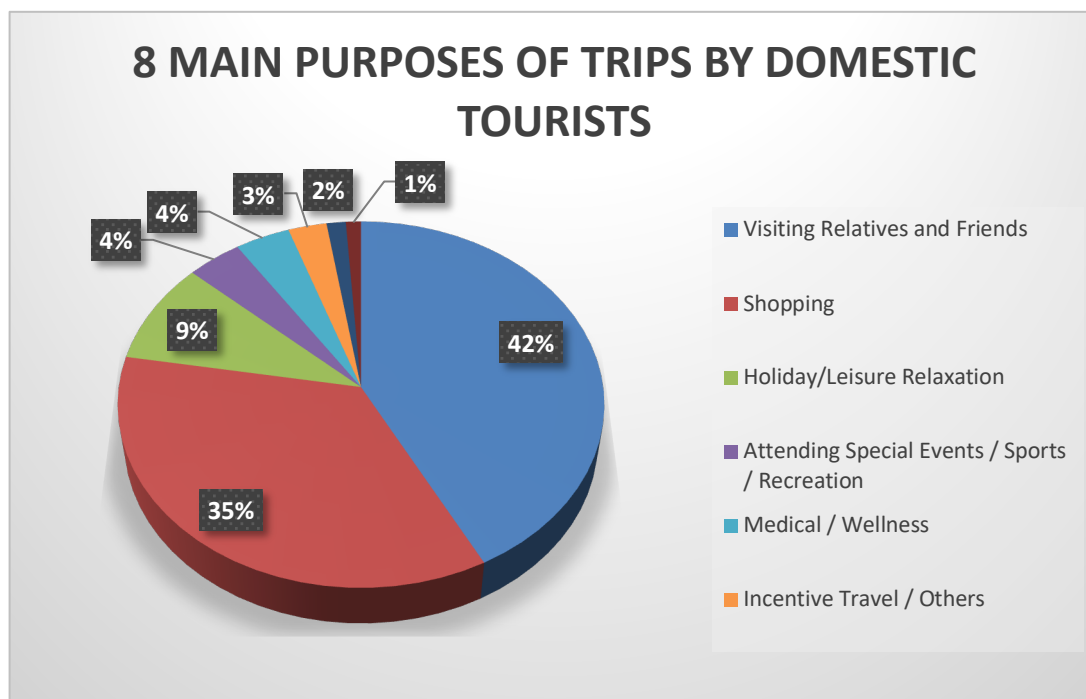


Figure 1.1 Eight main purposes of trips by domestic tourists (Malaysia Tourism Annual Report, 2019)

## 1.2 Background: Adventure Tourism and Risk

Over the last two decades, adventure tourism has significantly generated research momentum in the international literature (Peacock et al., 2017; Zainudin et al., 2020). This topic has extended the interest of both academics and practitioners as they realize the enormous potential within this tourism market niche. The Oxford Dictionary (2020) 10<sup>th</sup> edition on page 389 defines “risk” as a “possibility of something bad happening at some time in future and a situation that can be dangerous or have a bad result”. Even though risk has been identified as a result of a negative outcome, adventure tourism appears to work oppositely. Risk and uncertainty of outcomes are core components of the adventure activity that tourists actively seek. Concerning the existing literature, most scholars agreed that risk is a central attraction and is the heart of the adventure tourism segment (Bentley, Page, & Laird, 2001; Buckley, 2010; Cater, 2006; Cloke et al., 1998; McKay, 2016, 2018a; Mueller et al., 2016). Furthermore, most literature also argued that there is no adventure without risk (Weber, 2001; Kane, 2010). Thus, since the risk is associated with uncertainty,



challenge, novelty, exploration, discovery, and how such characteristics can conflict with emotions, the risk is an essential consideration for those who are involved in adventure tourism (Swarbrooke et al., 2003; Wang et al., 2019). Through the risk, participants who undertake commercial adventure tourism activities are rewarded with a satisfying adventure experience.

According to Kerr et al. (2012), adventure tourism generally contains two types of risk, namely physical risk, and social risk. Meanwhile, Clinch et al. (2017) argued that adventure tourism contains commercial, legal, medical, physical, operational, and, social risks. Although several risks have been highlighted to be commonly related to adventure tourism, both studies emphasize that physical risks are apparent and must be managed. Thus, as risks continue to form an integral part of adventure tourism, they will still be needed to be appropriately managed to guarantee safety in commercial adventure tourism activities. Without proper and effective management, it can potentially lead to injury and accident. In the adventure tourism commercial business, risk and safety constantly contradict each other. In this situation, adventure tourism businesses need to restrain the risk involved and emphasize safety to a certain extent. To date, risk has always been a significant issue for groups that are involved entirely in areas of adventure tourism, particularly for adventure tourism company providers and specialist adventure operators.

Through the commercialization of adventure tourism, the safety of participants has shifted from participants to adventure operators. Adventure operators now attempt to provide the illusion of risk without delivering genuine danger. In essence, the operators attempt to eliminate the risks while retaining excitement. Although numerous studies have begun to explore the scope of risks associated with the adventure tourism sector and the ability to control injury risk through risk management since the early '20s, Cheng (2018) highlighted that safety and risk management have received limited attention within the last decade. Despite the apparent need for it, frameworks of risk management have yet to emerge within the adventure tourism literature (Bentley et al., 2010; Cheng, 2018; Hansen et al., 2020b). Meanwhile in Malaysian context, Putit et al. (2014) highlighted in their study that there is a needs of adventure tourism having and developing a proper tool to continual monitoring of the

comprehensive of risk management and the practices due to the lack of awareness in risk management by local adventure tourism businesses.

Consequently, risk management is a crucial part for adventure operators to understand. In addition, it is also vital for adventure operators to manage risks effectively and appropriately if they want to thrive and grow their business. In other words, without proper risk management in the adventure tourism sector and adventure businesses, it may lead to several issues such as accidents and injuries, poor safety standards, non-training staff members, legal regulations, licensed and unlicensed operators, inadequate consumer protection, and unstandardized operating procedures.

### **1.3 Problem Statement**

Participants in adventure tourism are linked to a risk of injury or even death (Laver et al., 2017). Since 2000, almost four million injuries in adventure activities have been reported (Sharma et al., 2015). According to the most recent statistics from Laver et al. (2017), the risk and severity of injury in international adventure tourism were unexpectedly high, accounting for nearly 70% of the total injury rate. Meanwhile, Zakaria et al. (2017) reported that there was 85.7 percent of Malaysians who had experienced injuries when participating in adventure activities. This high percentage of total injuries testifies that adventure tourism involves significant risk. Without appropriate risk management plans, accidents and incidents can occur. Furthermore, the media frequently highlights risks involved in adventure tourism, which are usually reported after a reported fatality accident. Thus, the increase in the number of reported accidents by media in the adventure tourism sector could bring a considerable negative impact on business and the entire tourism industry.

Since adventure tourism has been internationally commercialized, there have been several tragedies that occurred due to improper risk management by adventure operators. In the mid-1990s, five tourists died during whitewater rafting activity in Queenstown, New Zealand. Based on the reports of the accident, the main factor that led to the occurrence of this incident was human errors such as negligence, pressure

on the guide due to the late start, failure to explain the trip entirely, and the trip should not have taken place on the day. This incident has resulted in a dramatic drop in visitors from 500 people a day to less than 50 people, thus leading to an estimated reduction in tourism income in Queenstown from NZ\$5 million to NZ\$2 million (Cater, 2006). In June 1999, four British tourists drowned during a whitewater rafting trip in Austria. A month later, twenty-one people (eight tourists and three guides) were killed in a flash flood during a canoeing expedition in Switzerland. The Adventure World, which was the adventure company that ran the trip, was strictly criticized for ignoring the storm warning during the day of the trip. The safety procedures of Adventure World were further questioned due to the death of an American Bungy jumper in May the following year. This tragedy occurred when the operators mistakenly picked up the wrong rope and failed to test it, which had caused Bungy to fail to slow the descent of the jumper, and his head slammed into the ground. As an effect, two instructors were given five-month suspended sentences and were ordered to pay \$580 each and the court's cost, whereas Adventure World was closed immediately after the accident (Cater, 2006).

Meanwhile, in Malaysia, a Dutch tourist drowned during a whitewater rafting trip down the Padas River, Sabah in October 2007. In this incident, the victim was thrown off the raft along with six others which included her husband, and her body was discovered 2 kilometers downstream (Vanar, 2007). In another incident that was reported in October 2010, a 35-year-old Arabic woman was killed while taking part in parasailing activity when she fell about 30 feet from the air into the sea off Penang's Batu Ferringhi beach. As a result, all the water sport activities operated by the operators were suspended (Mok, 2013). In March 2018, a British tourist was killed in a hiking accident in Malaysia. The tourist died after falling and hitting his head on sharp rocks while climbing the Pinnacle trail at Mount Mulu in Miri, Sarawak (Bernama, 2018).

Furthermore, two people, including a tourist from China, suffered injuries in a tandem paragliding accident in Ranau, Sabah. This paragliding accident happened in May 2019 when the guide and his passenger (a tourist from China) fell from an unknown height into a forested area (Clarence, 2019). In September 2019, a local tourist drowned and died in a water-rafting incident in Gopeng, Perak. This incident happened when the boat overturned about 500m from the departure point, and it was

reported that the river current was strong due to the heavy rain before the incident (Bernama, 2019). In another incident, a local tourist suffered a spinal fracture in the September 2020 rope swing incident. This incident happened when the rope snapped, and the tourist was smashed into a rock and fell into a river. As a result, the operator was suspended (Amirul, 2020).

The continuous happening of such incidents in this country showed that there is still a lack of knowledge regarding risk management in the adventure tourism sector and particularly among local adventure tourism businesses. Furthermore, the increase of accidents in this sector demonstrates the importance of having adequate risk management to avoid any incidents from happening. The accidents in Malaysia have severely impacted adventure tourism, especially in attracting tourists to participate in this activity. All the incidents in adventure activities revealed that accidents would negatively impact the economy, tourism industry, and demand for adventure tourism products.

Managing risk in commercial adventure tourism operations is critical for the safety of travelers and the avoidance of litigation in the event of accidents. Improper risk management in this business may result in the loss of the firm's reputation, money, employees, client confidence and trust, and the eventual closure of the business (Senthilkumaran et al., 2017). Effective management of risk in adventure tourism is crucial for the long-term operations of adventure tourism as accidents have a significant impact on the business (Clinch et al., 2017). Thus, it is critical for all stakeholders, especially specialist adventure operators and adventure tourism company providers to have practical tools and models for managing business risk efficiently to avoid any circumstances that can lead to an accident. The development of this industry level standard through a standardization and efficient of risk management practices to control the risk involved in adventure tourism activities can be aimed to win customer trust and heighten the quality of services offered by the local adventure tourism businesses. By having this, the adventure tourism business can be operated smoothly by having a strong reputation and customer confidence. At the same time, effective risk management will benefit adventure tourism businesses to grow and deliver quality products to customers.

The Event Management Body of Knowledge (EMBOK) model has been highlighted as a potentially useful risk management framework whereby any industry may implement this model successfully in organizing and managing events (Silvers, 2005). According to Silvers (2004), the International EMBOK is a conceptual framework that comprises processes, phases, core values, and function or knowledge domains that can be customized to fit the needs of a variety of users, including governments, academics, and industry practitioners. The International EMBOK model is advantageous and has been widely recognized as an effective risk management tool worldwide (Milanović et al., 2014; Silvers, 2005, 2009). As illustrated in Figure 1.2, the EMBOK structure model provides a three-dimensional approach to event management and risk management for those events. The EMBOK model is established as a comprehensive framework that outlines the event risk management process logically and systematically (Milanović et al., 2014; Silvers, 2005).

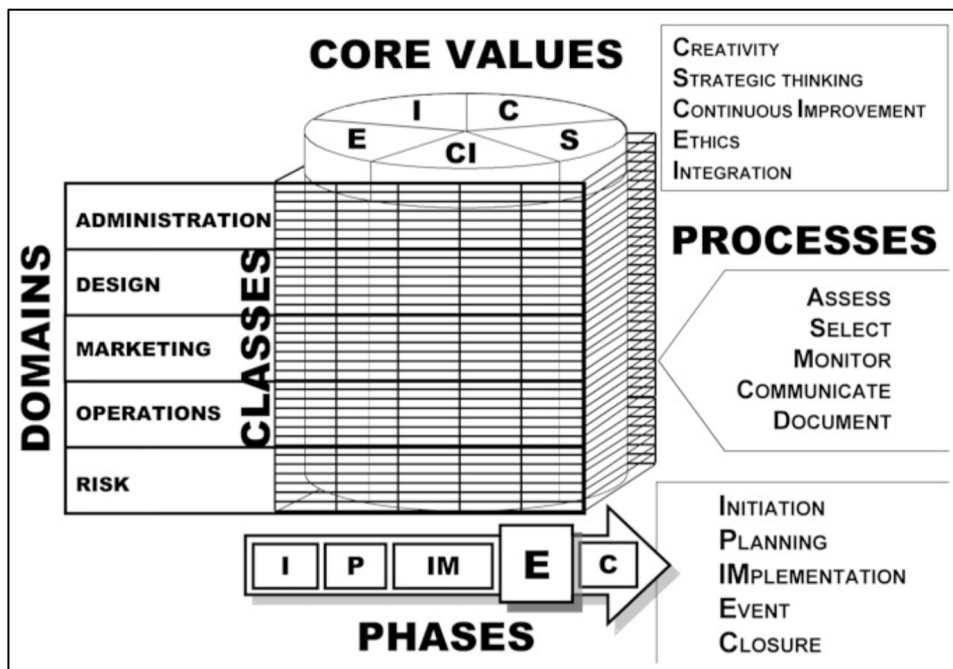


Figure 1.2 Event Management Body of Knowledge (EMBOK) Structure Model (Silvers, 2004).

The advantage of implementing the EMBOK model in organizing and managing events is that it encompasses each specific area of events that managers must

focus on as well as provides an appropriate tool for event risk management, particularly in the area of identifying potential risks (Milanović et al., 2014). Silvers (2005) defined the risk domain as all the protective obligations, opportunities, and legalities traditionally in any business. The risk domain comprises compliance management, decision management, emergency management, health and safety management, insurance management, legal management, and security management.

This study not only will explore whether local adventure tourism businesses adhere to any risk management guidelines or models, but also will seek to advise on applying and implementing the EMBOK model as part of their risk management responsibilities. A more profound understanding and increase in these risk management implementations will hence contribute to the successful growth of the adventure tourism industry in Malaysia.

#### **1.4 Research Questions**

With the research problem in mind, this study aims to advance the knowledge of risks and risk management in adventure tourism. Therefore, three research questions were developed for this study, which are:

1. What are the risks associated with adventure tourism activities?
2. How are the risks currently managed by the local adventure tourism businesses in Malaysia?
3. How may these risks be effectively managed with the implementation of the Event Management Body of Knowledge (EMBOK) model?

## **1.5 Research Objectives**

In line with the research questions, three research objectives for this study were established as follows:

1. To identify the risks associated with adventure tourism activities.
2. To understand how adventure tourism businesses manage the risks in adventure activities and to find out what tools, guidelines, or models are used in the adventure tourism businesses in managing their risks.
3. To suggest the application and relevance of the Event Management Body of Knowledge (EMBOK) model as part of local adventure tourism businesses in risk management responsibilities.

## **1.6 Scope of Study**

Based on the inherent risk and commonly highlighted as a main issue in the adventure tourism industry, this study primarily focussed on how Malaysian small adventure tourism businesses currently manage the risks. In this industry, it is crucial to have effective and appropriate risk management to ensure the safety of clients and the sustainability of the business as well as the industry. Thus, this study firstly will identify the type of risk commonly associated with adventure tourism activities. Next, this study explores how local adventure tourism businesses can effectively manage the risks.

This study is focused only on the small tourism businesses which offer adventure activities as their main products and service to the clients. Based on the previous tourism literature (Aydin et al., 2018; Hussain et al., 2016; Roberts et al., 2008), small tourism businesses comprise small-scale and locally owned activities. In addition, Hamzah (1997) defined small tourism businesses as facilities initially constructed and provided that are operated by the local population and retain an element of local ownership. Meanwhile, Zhang et al. (2018) claim that small tourism

businesses are operated on a small scale basis in terms of size and operational business space, adopting slow growth, employees, and capital investment. Thus, by referring to all criteria defined as a small tourism business, three local businesses identified as small adventure tourism businesses (operators) in West Malaysia have been involved in this study. The operators were chosen based on the adventure activities they offered as their primary business. Furthermore, this study focuses on the operators who offered challenging adventure activities since they generally link it to significant risks. The size and duration of operation in the adventure tourism sector are also considered to obtain more reliable findings for this study.

In terms of methodology scope, this study was conducted in a case study research approach. The case study was chosen as a method to conduct this study due to the exploratory nature that has in this research. A case study can be defined as a research situation involving the investigation of the case in-depth within its real-world context, and the boundaries between the case and context might not be distinctly evident (Yin, 2014). Furthermore, to make the evidence more compelling and the overall study more robust, multiple case studies were used in this study to have a distinct advantage compared to the single-case design.

## **1.7 Research Significance**

The outcome of this study may provide additional information to better understand the main issues, challenges and opportunities, potential, and prospects of adventure tourism in Malaysia. This study may also provide adventure tourism management guidelines to assist the developing adventure tourism business in Malaysia. It will provide a better understanding of the professional risk management strategies that are adopted in the Malaysian adventure business. The adventure businesses can also identify the best practice risk management approaches and a decision-making process that should be integrated into risk management within adventure tourism to ensure the safe delivery of its activities. Besides, information gained from this study may be helpful as a reference for the practitioners, particularly



for local and specialist adventure tourism businesses to ensure the growth of business and sustainability in adapting to the current market challenge in the adventure tourism industry to be further expanded internationally.

Furthermore, this study could serve as a valuable reference for the related Malaysian adventure tourism stakeholders. It can become a reference for customers, residents, tourism partners, adventure operators, government, and non-government organizations (NGOs) when being involved directly or indirectly in these adventure tourism activities or industries. For the government and NGOs such as the Ministry of Youth and Sport, Ministry of Tourism and Culture, Malaysia Scuba Diving Association, Malaysia Canoe Association, and Kuala Lumpur Skydive Association, this study will be a helpful reference to create or amend the policies related to adventure tourism in Malaysia. Having the right adventure tourism policy is essential to the economic impact, and it will indirectly contribute to the increase of gross national income, particularly in the tourism sector.

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## Appendix A Interview Transcript

Company A – Informant 1	
Company Name	: <b>Operator A</b>
Name	: <b>Informant 1</b>
Location	: Kuala Kubu Rope swing Site
Date & Time	: 29 Dec 2018 @ 5.00pm
<b>Note: R = Researcher; I = Informant</b>	
<p>R: Can you explain about your background as well as how this company started?</p> <p>I: Basically, we're starting from 2016, when the department of fisheries and forestry has a program nearby the Chilling River. They asked us to handle a flying fox and abseiling activity. However, we propose to do the rope swing because before that, we had made this activity once at Sg. Petak department, which under the bridge. We asked to prepare the rope swing here (KKB Bridge) because it was high. They said, "just do if you want". And then when it's done, there are media and bloggers on the that day (launching day) to discover this activity. This is a new thing. So, they feel that this activity was interesting. First in Malaysia, and the new things in the world. Not only in Malaysia. Usually, we are just familiar with bungee. Not common for rope swing. It's a two different thing. So, they called for meeting. They called all the related departments. Forestry, JPS, JKR, JPAM, Police and Fire Rescue. They thought that this area owned by forestry. However, when they checked at land office, its owned by JPS. So basically, we already had approval from the related agencies. This bridge, from JKR. This road is a federal road. So, we should ask ministry. Most of land are owned by JPS. Wide river. For all the elements they request to call NIOSH to check. But for your information, NIOSH is more to occupational. So, NIOSH appoint MCCA. MCCA is stand for Malaysia Challenge Course Association and then they refer to international body such as ACCA. No, ACCT. Like a flying fox, rock climbing its already have their own standard. Type of cable, kind of equipment, and the SOP. But not for rope swing. A new thing. So, they find the closest and similar activity. There is one activity call lift of weight which it is using the safety equipment and the participant should jump to grab the thing in front of him. This activity using the safety equipment. And they see the similarity with this activity. So, we create our own SOP.</p> <p>So, this activity has been going on since 2017. It means that one year it has to stop. Get approval for everything. So, early of that year we started to turn around. However, on last March, there is an issue when we allowed the participants to jump with his kid. There are two participants who jump with their son. People asked why we allowed kids do a bungee? I don't think that is an issue at all. This action has been done before by foreign country and people. People confused between the rope swing and bungee. Why should allowed kids to do a bungee? Then, we try to explain. This is not a bungee, but it is a rope swing. People are concerned what if the kids have whiplash or stabbed. Even for adults, if the bounces are not good, they can hurt their waist. However, this is a rope swing. Feedback from the participants is good and not hurt their waist. But people still confused with the bungee. So, our activity is aware by city council. Here's her letter. Hmm... The city council is aware of this activity. The city council wants to acknowledge paragliding, rope swing, water rafting. Means that we are very serious with this activity. Not for just play around. Police were there if you noticed. OK, for your information, we just need to</p>	

inform the police to use the bridge. So, we attach a letter from JKR announcing the use of the bridge.

This is our SOP (showed the SOP manual). General operating procedure. We have explained regarding the purpose and scope of this SOP. What standard that we follow. Its Association for Challenge Course Technology (ACCT) and PRCSA.

R: What standard that you follow? Its international standard or local standard?

I: International standard. So, it has introduction. We use laser to measure the height between bridge and river. Not random. Its 59.5m rounded it to 60m. This is the location plan, key plan, and site plan (referring to SOP manual). So, we do the analysis for this area, also for this site. The strength, weakness, opportunities, challenge. There is other location that we can do for this rope swing activity. But the traffic condition is not suitable. Here, there are no heavy traffic. So, this is the equipment and material (referring to SOP manual). We decide everything by referring to international standard. No local standard can be referred. Hmm...

R: How you choose the equipment and how to decide?

I: We study based on suitability. Based on costing, and convenience to handle. Every cable and hook has a different use. What kind of cable, clip...? For equipment we have third party to check. We call as a PP verifier. They will check. Then we do the calculation. We cannot roughly estimate the rope strength or cable strength without calculation. For a tree, we called a certified arborist. Tree specialized. Then they will endorse the tree certificate and will come back every 6 months to do the continuous inspection. For the safety purpose, we will change the rope according to the time limit. We also use a double rope for safety. We have all the calculation to make sure the rope will change according to the limit.

This is the procedure for jumping. This area we call the Zone A, area for assembly. The place where the car park and register. Zone B is a traffic area. This is a waiting area. Zone C is a dispatcher in the platform area. Zone D is the landing area (down area). So, all procedures and crew members' task have been stated according to the specific area. Before, current, and after what they should do. So, we have rules and regulations. What Do's and don'ts do for the crew and the participants. Medical condition. At the time of the demo, people from the health ministry even came to see him.

R: In terms of health, should participant declare about their health condition?

I: Yes. Participant should declare their health condition. This is an indemnity form. At the back, there are participant health details for our record. If the participant has blood pressure, that does not mean that he/she cannot do this activity. Asthma too. We try to consult. We have our own ERP, emergency response plan if there are any unexpected things that should happen.

R: All the SOP are by your own initiative? Is there any specific guideline from ministry?

I: Yes. No specific guideline. However, we have referred to one guideline given. It's called HIRARC (general risk management plan). It has rules and regulations checklists. OK. For the road and traffic control. All the places that cones should be placed has its specific drawing. This is the drawing (Referring to SOP manual). We have drawn traffic details in a piece of A4 paper with chop and sign. Got the approval from TMO (traffic management officer). He (TMO) gets the license from CIDB. They will decide how many cones we should put, where to put them... How many signboards, what kinds of signboards, and where they should be put? These are all the letters from JPS, with no restrictions. Same for JKR and ministry. No restriction. This is birth cert for cable. Type of cable, the strength. We installed the cable by our own. This is birth cert for rope. This is arborist report. Whether the tree is fit or not. (Referring to SOP manual).

R: How about safety audit purpose? Is there any requirement regarding this and is there any authorised body has been appointed to do the safety audit for this business?

I: Hmm... honestly... No specific agency for safety audit. However, we called NIOSH for the first safety advice and arborist for the strength certificate of a tree. We pay using our own money for the cost. But NIOSH is not involved anymore for this time.

R: When this company started to establish?

I: From 2010. Before this, we organize many programs for trekking, mount climbing, waterfall. We do many things. Until now, we still do these programs. But currently we focus here (rope swing). For all mount climbing trip, I passed to another crews. We have lot of crews.

R: Other than MCCA, is there any other bodies or parties such as ministry involved?

I: At the meeting, there are representatives from Selangor tourism, also a representative from Malaysia tourism. But we can't rely on them. Serious. Just attend the meeting. After we have presented, and so on, they said OK. Just do. After that, when NIOSH told them to pay a certain amount, thousand dollars for the report, we asked for the budget, they said oh no. You should pay by yourself. There is not help. There is not help. For KBS, because this is a new thing, they cannot see what actually rope swing is. We had tried approach KJ but there is political issue. Why should KJ interfere in Selangor? More to our own. Ourselves.

R: For the adventure tourism industry? How the support? Is there any specific license require to run this business?

I: Hmmmm... In KJ era, Ok. Syed Sadiq era, he more to E-Sport. "Entah apa-apa entah". Before KJ, Dato' Khalid Yunus, we got supports for Everest teams and mountain activities. But still have less support. Agree when people and other friends said that our industry is not well develop. We are far behind our neighbour country, Indonesia. They have their

brand and have a livelier scene. We are just starting to grow. Everyone just recently goes hiking and create group members. After the adventure activities become trending. Within two to three years, we can see the development and growth of this industry. And then we have so many bureaucracy conflicts. No specific license is required to run this business. If you want to organize any mountaineering trips, you should only have the license. It is better to have an authorized guide. For forest trips, we called it a green card. The guide should have a green card. For tourist guide, it called as a blue card. Provided by wildlife department. Hmm... wildlife or forestry. I'm forgetting. But, between them also they have conflicts. In Malaysia, there is redundant enforcement by over one agency. Like this forest case, who is in charge? Forestry or wildlife? And then there are many things that go wrong.

R: In terms of staff qualification? is there any qualified staff from specific certification?

I: One requirement from MCCA, staffs should have a certificate relating to rope activity. There is no certificate specific for a rope swing. Any certificate related to rope is considered ok. There are some agencies can give the certificate. For example, KBS. For International, Southeast Asia Climbing Federation (SEACF) but its only for climbing. But they will teach all about basic. So, related with rope. Anything related to rope. For industrial, any workers who works as building cleaner, building climber. That's for industrial. The certification I mention before is for recreational. For industrial we have IRATA and SPRAT. IRATA is international and SPRAT is local. Also, can use. Acceptable. But the problem is, we don't have permanent crew member. Mostly part-time. I have plan to send them to get a certification, but they are part time crew. Not worth. Anyway, I have CPR and first aid certification. Actually, I am nature guide. Always become guide for any mountaineering trip. In Malaysia, we have Malim Gunung Association (PMGM). PMGM have organize many courses such as CPR, basic water safety. KBS also.

R: Is there are incident or injury occur since you become an operator?

Informant: Alhamdulillah, so far, there are no serious incidents that occur throughout the business operation. Hmm... for rope swing there is no incident occur so far. Yes, for the zipline. Sometimes the brake (pulley) gets stuck, and it stops immediately (in the middle of the line). the participant will have some cuts. There is another incident when the zipline did not stop exactly at the stopper. So, the participant fell. Luckily, there were no serious injuries. Just slips and sprains. Anyway, we have the SOP for any circumstance.

R: How about insurance?

I: OK. That's a famous question for us. Is there any company providing insurance for these activities? People always ask for insurance. If there is no insurance, they do want to try this activity. Sunway Lagoon also has no insurance. Skypark too. Once you sign the indemnity form, automatically all insurance coverage is void. You do under your requests. However, there is one company that provides insurance for this activity. MSIG. But you should get the participants' details one week earlier. For this activity, usually based on a walk-in basis. So, it's difficult to manage the insurance things. However, we very care with the safety things. We will change the rope according to the time limit. We

also use double rope for safety. We have all the calculation to make sure the rope will change according to the time limit.

R: Do you have your own legal team?

I: In process. Have the plan but for now we do not have the legal team. In process.

R: Have you heard about the Event Management Body of Knowledge (EMBOK)?

Informant: No. Haven't heard about that (EMBOK)

R: Are you interested to know more and to apply the EMBOK model for your risk management plan?

I: Sure, if it will give benefit for my business and industry.

#### Company B – Informant 2

Company Name : **Operator B**  
Name : **Informant 2**  
Location : Kampar, Perak Site  
Date & Time : 14 January 2019 @ 5pm

**Note: R = Researcher; I = Informant**

R: Can you explain about your background as well as how this company started?

I: First, I'm started from 16 years old. At that time, I'm started as a "budak Milo". Just follow. My task is to prepare for F&B things. For preparation. After that, I start followed for rafting. My first experience when I was 17 years old. On 16 I'm still follow and start from 17 I'm started to involve. From the first-grade river, Sg Kiulu which is my hometown. I'm not sure in what year Riverbug came (Sg Kiulu) but at that time, Riverbug is an only operator that operates at there. In Sabah, Riverbug was known as Traverse Tours. So, Traverse Tours was developed since 1995 or maybe in 1997, if I'm not mistaken. And then I started to involve around 2002 hmm sorry 2001 and then to 2003. So, and then start from there, I'm on tour as a freelance. I work as a freelance for a one year not as a full timer. So, when Traverse Tours or known as Riverbug open their branch here in 2004, but at that time (2004) there are other persons came to make a survey for this place. At that time, less of people know about this place. Then, after 2004 we start to set up and have only one tour. Only rafting. Then, from time to time, we start for Gua Tempurung caving activity. As I mentioned before, in 1995 we set up and had only one tour only. Our main tourists came from Singapore. So, our tour was very slow. We depended only on rafting. Then after, there were other companies and also other competitors, and we built a new product. For example, we do on our own for Gua Tempurung. Then we do for Gua Kandu. Then we offer for a jungle trekking, we offer hiking, then kayaking, hmm tubing. Yes, before this we are not so focus on tubing. Sales is always up and down. And our main products here is of course white-water rafting. Yes, because we are specializing for white-water rafting right. And then after all that, Riverbug try to offer another product to

attract clients from daytrip to overnight basis. So, our attraction at that time is one of the resorts that locate at the starting point. And then from time to time, there are a lot of competitors and then Riverbug try to build another facility. For examples, like this lodge. This lodge start the operations not sure at what year. Around 2011 or 2010 around that. And then after it open and operate, the new product was introduced. And then one of the activities that has been focused is tubing, night walk, and jungle trekking. "Rafflesia" trekking is one of the products that has been introduce. For "Rafflesia" trekking, we can open the work opportunity for local people especially for "orang asli". When we have trip and need to go there, we will hire "orang asli" to guide us to that place. And then, maybe we will have other products for the future like scavenging. For others place (country), scavenging is common product for adventure tourism but in Malaysia there are still limited. Scavenging is a hunting activity to find a herbs or jungle food. We go there to collect and then we will cook whether using the tradition method or current. But usually tradition. But this place, we can see, it's a real forest (point his hand to the back of river). But that place was gazette as a National Parl. So, if we want to enter the forest, we need a permit. So, we can scavenge in this mini jungle or "semak-semak". And then other than scavenging product, maybe we have flying fox for the future, maybe climbing wall and more activities will be introduced.

R: What a main risk that commonly this business should be aware?

I: Commonly, is complaints and comments. It's a very sure for this industry. Because we gave a service for the people right. We always receive comments from the participants, whether they're good or not. But, in today's situation, a negative comment can be one of the risks for our business. We can lose our customers if we have a bad reputation and image. So, comments that we received has become one of our guidelines to improve. Which means, next time or whenever we conduct something for improvement or any plans, we can study the plan and we can use that as a guideline. That is one of risk to get a comment on how to improve and then others risk, on safety. On safety... hmm... We are usually very strict in safety matter because, generally, water sport is very adventure. The person who comes here has zero knowledge, zero experience. So, each of people have their own history experience, maybe like a traumatize. So, there are people who start to involve back to gain their trust. That's why we always need to up our activities and set a high level of safety. For the explanations, we must explain the details. We cannot give for the easier example, like in theme park. If in the theme park, there are no briefing regarding attire or what should they use or what they cannot use or what they can do or what they cannot do. Because most people who came for this white-water rafting activity is like a theme park. We will give briefing. For each our briefings, we will brief every detail to make sure they understand. So, this is different with the theme park. We brief them regarding the attire or what they should use or what they should not use or what they could do or could not do. So, safety level for theme park maybe not too high but we can take from that to improve in this outdoor field. Briefing... It's important. It's like a process of transferring knowledge. So, that's how we explained to people who are came here to give them knowledge regarding this water sport which are not dangerous. So, it can be easier for customers; also, for us. In addition, this activity is goods for adults to kids. Its goods and better if we can expose this to kids start from, they are little.

Here, we cannot do one man show. It must be as a team or organization. It can't be one-man show. It must be in a group. From that, we can make safety more efficient because

of communication... and communication is very important. Risk can be minimized with more people... it can be reduced. That's a guide's duty, and it comes from communication. They are not only to guide direction, but also to give the information. Information whether to them who are new to be involved or whoever who needs to know regarding this activity.

R: Since you become a river guide or involve in this industry, have you face any incident?

I: So, as I mentioned earlier. We play with dangerous fun, which means the risk is there (real). People always get injured, such as falls, bruises, a bit of dislocation, sprains, cuts, and slips. But the major incident has never happened so far. Hopefully..... will never happen. So far no. No. Drowning... in this river has happened, but not for this activity. "Orang luar" come here. With no safety, do know how to swim. That case happens here. But for this activity so far no. But the risk like being thrown out from the boat, hitting the rocks, hitting the wall, drinking too much water, which is considered almost as drowning... always happen. But it's still under control and there is no fatal case. So far so good. Hmmm... In Sabah also, no. So far, under the Riverbug there are no incident. Hopefully will not happen. Because when there are one of the operators face any incident, it will affect to the entire place. So, that why we as a river guide, although are from different operator, but when we are in the river, we will communicate with each other's. But I am not sure for others place. But in here, or Sabah that's what I experienced. Like other river that I went before, Sg Padas, Sg Kiulu, Sg Kampar, Sg Sedim Kedah, when there is other operator came to the river, it will give a cooperation. So, there are no "istilah" you are from different company, and you are from different company. Because there is only one mission for river guide. Safety. That's a very important.

R: Although there are only minor injuries, do you have record or logbook for these injuries?

I: Yes. We have records (for minor injuries case), because in this company, we use a pyramid level. This means the below (of the pyramid) we have 100, at the middle (of the pyramid) have 50 and at the top (of the pyramid) is 1. So, which mean we will minimize the risk from the bottom. In the 100, for example, they are facing minor injuries... that's what we should avoid. If we overlook (the minor injury cases), it will go up to 50. So, from 50 it will go up to 1 and it means a major incident. It will involve death or life. So, that's what we should avoid. So far, we are only in 100 level. Never go up to 50. Never go up. So, we always at the bottom. Every single minor incident is a common, but the major people always saw and follow. But that minor things will lead us going up to 50. For example, our activity before. We didn't bring or give any glove. We have a reason. One the reason because we minimize the risk. Yes, you have an injured, but it does not involve the major injured. Or involve the serious rescue process. So, we conduct with the high quality to make sure it will not go up to 50. But the pyramid system is only for Riverbug. For another operator I am not sure... for this company, we use this system. Pyramid system.

R: Is there any regulation or code practice that operator should follow in this Malaysia's industry?



I: In Malaysia, so far no. There are no specific regulations... But I think in the future, it should be handled by an industrial party... What we call that, hmm... HO? HAIO? Hmm NIOSH, yes NIOSH. It will go under NIOSH. Because maybe NIOSH also will take this water adventure sport into their system. Just heard about that. But so far don't have. We follow the regulations from overseas. We are certified under International Rafting Federation (IRF). All of this are from our initiatives.

R: How about specific licensing? Is there any license you should apply?

I: Hmm... so far don't have. No specific license. Also, no specific practices and policies. As I mentioned before, we follow the practices and policy from overseas because we are certified under IRF.

R: Do you think that with the regulation from government, it will give an impact to industry especially to adventure sport or adventure tourism?

I: I'm not sure about that but based on my experience, it's good to have standard regulation. We will have the international level and become well known. So, we can have an organization that can monitor in terms of development or safety. So, we have that standard... Malaysia standard (regulation). But for now, we don't have that. It will help. Maybe it also will give some negative effect but I'm not so sure. But in my opinion, if we had that, it will become easier. For example, like a tour guide. They have their own association. So, this tour guide has their different level in order to them take the need courses in Malaysia. Without blue batch or green batch, they can't do tour in the jungle or else can't do tour in the town.

As mentioned before, to do this business, we are not required to apply for any specific license. Anyone can organize any adventure activities and offer such services. So, with no experience, knowledge, and proper equipment, they offer to become a guide and start offering the service as an operator. It is unsafe. We don't want this situation to continue to happen because it's so risky

R: So, how about regarding safety audit in this industry? There are any related body come for checking or audit purpose.

I: Yes, some of company depends on which one can make easier for them. Depend to standard. But for Riverbug, we have our standard (audit) and we also have our department (audit). Safety department, to check the equipment, check the assets... like an ISO lah. So, there are other company that using ISO. So, Riverbug company do have their standard. We have an equipment audit. We have a record for each equipment that we used. How many hours it has been used, because for example, like a PFD (professional floating device) has expired? Same as PFD that is used in the sea. As for the sea use, it can be used only for 12 hours. So, the PFD that we use, the biggest one, can be used for 24 hours. So, from that, we can record the floating rate or their life use rate. From that, only we can change to the new one.

Same as a boat. The one that we repaired, how long it can be use. First, we should buy based on quality, how long it can be used. And then, when it defects and we repair, how long it can be used. We continuously maintain until it gets changed with the new one.

R: How about the guide qualification?

I: Our qualification is from IRF. So, it has 4 categories. It's for raft guides, trip leaders, instructors, assistants. So, as instructors, they can give a training to others. But they cannot give a certificate. Except accessor. As raft guide, they only can carry tourists in the boat. They have different tasks. Trip leader, commonly they will conduct the group.

R: How many qualified guides in Riverbug?

I: Not including in Sabah, here we have raft guide... wait a minute... I count... Forget already. 9 persons. 8 raft guides, 1 trip leader. All permanent.

R: Do Riverbug have its own risk policy?

I: Yes, we have (own risk policy). We have that from the beginning. From the first, we started this business. Done by the company's owner.

R: So far, do you think that Riverbug succeed to manage the risk effectively?

I: So far, we manage with the proper way. Because we still not reach the 50 level. We still at the bottom which means that the system is function very well. And all the staff also follow the policies very well. So, everybody must know. It's not only, for example he his leader, or supervisor, or head department. From the staff to highest rank.

We have proper documentation for the contingency plan and SOP.

For emergency plan, we have only until plan B. We had plan A, we had plan B. Risk assessment is based on our experience. For example, if there were participants injured in the river, we had the SOP. The first step is what should we do. The second step is what we should do. Third, what should we do? We will follow the SOP. It's a risk assessment. We can use the SOP as a guideline for the risk assessment.

R: How to ensure the participants health and fit very well to join all the activities?

I: Participants should declare their health condition or status. Whether they have any problems like blood pressure, asthma, or allergies. So, we can now and then consult whether they can do the activity and also standby if a bad event happens.

R: How about first aid?

I: Everyone (guides) should have a first aid knowledge. Before we can upgrade or renew our IRF license, we should have the first aid license first. We should have a first aid course, then we can renew our IRF license.

R: What is your strategy to ensure participants safety during the activity?

I: Before we start with any activity, we should know how many participants are involved in each activity. So, we can decide how many crew members should handle the tasks.

Besides that, we control how many participants are in certain area. For example, on top of the waterfall. Only 3 or 4 participants can wait there. After one or two can go down, the next participant will hike. While waiting, we fix them with a safety rope to avoid slipping.

For caving, there are crowd management system to limit the participants in the caves. Before we can start the activity, we ask permission from the person who may control in and out the numbers of the persons into the cave. Only a certain maximum people are allowed being in the cave.

R: Is there any insurance for this activity? Insurance for company or participant?

I: Yes, the participant is insured. The product (insurance) is there... actually we give them the option. But usually, we suggest buying insurance. Like we fly, not only person should be insured, but our things also need the insurance. We (company) should buy insurance. That's how we do the marketing. But it's more to the marketing part. That's why we can see the price difference. So, there is client that came to compare with the other company. So, which means we do by our own style. Whether it's effective or not. Because for me personally, it's better to offer the insurance. But usually, the clients will ask (about insurance). But yes, the answer is we will provide the insurance.

R: Have you heard about EMBOK model? If yes, do you interested to know and learn about that?

I: Yes. For me it's a good knowledge to make the risk assessment for powerful. It's good to bring our adventure tourism to the international level. That's better. Because in Malaysia, currently most of the operators in the industry do not follow one standard; they follow a lot of standards. They use their standard, copy-paste, and yes, that's what I mean. In Malaysia, it happened (using their standard). That is why, if we have that (EMBOK model) we will have a national level. Not only for white water rafting, but we can also use it for sea sport and all the adventure sport and adventure tourism. Maybe all related to this industry can become standard.

<b>Company C – Informant 3</b>	
Company Name	: <b>Operator C</b>
Name	: <b>Informant 3</b>
Location	: Ulu Slim, Perak
Date & Time	: 28 April 2019 (9pm)
<b>Note: R = Researcher; I = Informant</b>	
R: What your view about risk management?	
<p>I: Firstly, risk management is depending on us. How many risks that we want to take. Risk can be divided into four. First, ourselves. Secondly, is customer, type of customer that we want to accept. Like, people from Arab. Try to not accept. They are stubborn and cannot listen for the instruction. It's true. For rafting, if people cannot listen, the risk can become more higher because this is likely more such as a sport with team building and teamwork. Even the guide is expert, but without teamwork, it can't be work. That all about force. That's about risk. For ourselves, it's about how we manage and run the activity. For example, run for each trip. How many participate that we want to accept. For example, the smaller group is better to minimise the risk. With the bigger group, it will lead to the higher and more risks. Risk about managing the transportation, all the thing, also the guides because our guides, from 50 guides, not all guide is A level. Same as school. The best, from 50 maybe 20 to 30 only. The others are so-so. So, that also is a risk. This is risk management. So, managing risk is depends on us. Even we put that in what number. But, to minimise risk, other than expertise, we should know about the place. For example, like the river, what the characteristic of the river. For example, like Sungai Selim. We should study whenever we go into the river. That's what we call study. Study about which the dangerous area, which area that we can do the invert raft.</p>	
R: So, the study will be done from time to time?	
<p>I: Yes. From time to time. Why? We do from the each of experience. Like a what we were taught about water rescue, it's about basic. It had 5 to 6 elements. But I will talk about basic. First, we should be alert. Alert means, from the part of human management itself. Boat management. Boat management means we should know each of boat. Different boat had different character. This is what we call expert. For expert, they know about character. And then, river management. River. Okay. River means, from here, we can know where the dangerous area is, what the risks before we enter the river. Okay, because for the river, there are 3 things that we should know. First, small stream. Second, big stream. Third, the locations of the rocks. So, for the people who are not familiar with the river, they will look all the river same. So, if we study about swift water rescue, we can know the stream that can hold means that can hold the boat. Even there are no rocks, but it can still hold the boat. Okay, then the stream we can hydraulic. Second, the most dangerous that had in river is woods. There are woods that fall down into the river. So sometimes we cannot see at the bottom of river. So, we should know that things. We called that in white water word as stray. Okay. That's for river. After that, it's about expertise. Before this is basic. Expertise means we need to practice. Practice. We practice minimising the risk. Means, for example client management. If we said 50, only 50. We still can control. We can find the best and goods guides. So, it depends on individual. On company. How many capacities that they are willing and can take. So, if we take more,</p>	

means the risk also can be more. More participants will lead more risk. Because risk is not only about rafting, communication also can be risk. Cannot communicate with the guides. So many participants. Sometimes, they cannot listen what we said. Right? Ya, so many participants. Maybe more than hundred. There is some participant might be refused to listen. So, all risks are depending on us. How we manage. Other than that river. River just a river. It cannot be change. The river is still there but if we are careless, that's the reason something happens. We know the rapid has a risk. Then, we should know the capacity of each boat. If the boat is for four, just four. Don't put until seven. That can be a risk. Then the level of river. What level that we can rafting. What level that we can't. Alright that's about risk management.

R: Can you explain about your background as well as how this company started?

I: I was involved and do for this almost 20 years. Yes about 1997. Raft Asia is a new company. But I have done all this for a long time. But at the time, I worked with this one company. Ha... this company is a first company that conduct the white water in Malaysia. I worked for them. But the company was no longer operate. I am the second generation. Second generation. Our bosses are first generation. But first generation is more to crossing and multiday trip. After we enter, by water were run. They are at different level. They more to 3 days 2 nights, went to Kelantan all that. Like an expedition.

Raft Asia started from 2013. Me, as a director, owner of Raft Asia. But we are considered as a pioneer guide in Malaysia for white water. Because in 1997, at that time, when we start there are no others company operating yet.

R: When and how this service started offered and open to the public participant?

I: Like this, it's about experience. When we start operating, we only have the basic. But, if we are not operating at that time, there are no will following right? So, after we has been operated around one to two years, then we took the course, called swift water rescue. So, in swift water rescue, they teach about river, how to handle ourselves, customer, together with the river.

R: The course was organized by whom?

I: In that year, there are no local course. At that time, we should take this course under Australia Association. Canoe Association. At oversea. But that time we joined together with KBS, in 1997 together also with MASCA. MASCA is a Malaysia canoe association. So, we organized together, and we invite the instructor from oversea and we get the participant around 30 peoples. So, we do that. Under these three agencies. MASCA, KBS and Canoe Association Australia. But it just for basic. They only teach about the basic. But, for the expertise part, we should do ourselves. We need to practice.

R: So, for the expertise. All from the own experience?

I: Yes, of course. Not like a school. In school, there are first level, second level, third level. Until university. This is not. This is more to the basic which is safety. Because the basic is

safety. The expertise is more from ourselves. Why? Because each river, they have different character. River is not like a field. We kick the ball on the same grass. So, for river after the water level increase, the force definitely different. When the water level decrease, also the force will change. We were taught more on that. Means that, after we know about our expertise, like know deeply about the river something like that... then we should handle everything by ourselves. Means, we should know where the risk can come from. Risk sometimes not only come from the river. But ourselves. Because we manage the risk. Ourselves. For example, we know that the participant cannot join the activity. But why we still allow them to join. They refused listen to us. So, we should reject. Risk is under own control. Risk come from us. So, whether it's a big river or small river. If you don't know to manage. Its difficult. All the risks come from us. Based on my experience. Sometimes. Even though we expert, the idiom from white water people, "even you are super expert, you should aspect nature". Nature will not tired. That's why, if usually we can handle only 10 persons, then we take 50 persons, then that's not our strength anymore. Then if we need to change, we should replan. Plan for the guide, who will we take, who will we teach, who that we can trust, then we should specify whether the guides are expert or not and got the experience or not.

R: What the criteria should have by the guide that you will hire?

I: There not so much criteria. No 1, they can listen leader's instruction. No 2, they should have knowledge. Not expect with a lot of knowledge. At least a bit knowledge about the white water. Then should not take a high-risk taker. We always mentioned, although the guide is super great, we should not take the maximum risk.

But for me, adventure is more to the knowledge. Then, ourselves. After we gain the knowledge, we should not over. Means, we cannot do something that below our capability. That lead to the bad thing happen. And then our ratio. How many guides to be had in one boat. All of this are risk. More people, higher risk that we should take. Here, capacity participant (in one boat) is 6 persons. 2 guides or just 1 guide. Different between 2 and 1 guide is more to expertise level (1 guide, high expert). Means, if he guides alone, he should have many skills. Communication skill, to communicate (with participant) need have a skill. Ok. Next, he should know how to control and handle the boat. If he doesn't have all that skill, we cannot assign him as a single. So, single means another level. The higher level. Means his grade are higher. Doesn't mean we just let go. If he said he can do as single, means he can control the boat (by himself). He's able to communicate with the participants and know how to manage his boat. No need helps from other guide.

R: What are different with this location (Ulu Slim) and Gopeng?

I: First, expert. Second, river. River technical. That the different. If we compare with the oversea, all same right? Correct. In all country. But, like river here, we can do single. But the work is quite heavy. This river is small. River flow is small. Like Kampar, the river also considers small. The smallest river in Malaysia. It's in III rapid class. Here, more than III. Kuala Kubu Baru IV rapid. But here we also can use a single guide, but as I mentioned before. The work is so heavy. Tomorrow you will see how the river look like. Selim River, we call as a technical river. The most technical river. Because the flow is about 2 to 3 feet small. Compare with the boat size which about 6 to 7 feet (width) and the long is about

14 feet. So, to control the boat with single guide capacity, is so hard. About 5 to 6 km. This river flow is smaller than Kampar.

R: If you can share, is there any specific regulation regarding this adventure business in Malaysia?

I: So far, no regulation. Because in Malaysia, regulation can be created if we have an association. Like kayak. Is there following its requirement. Should have 1 star, 2-star, 3-star then they allow to do kayak. In Malaysia, especially for white water rafting and also adventure tourism industry itself, we have no association. So, there is no regulation. Unless we had that association, then we can follow all the requirement and regulation from the association. So, then we can propose to the ministry. This one for rafting. For trekking, it has association. For rafting, no association. Like mountaineering or hiking, they have formed the association. So, if anyone or company need for the license, they should apply through the association. KBS maybe. But for this rafting, still no. Because to standardize and create any standard, we should form an association. Like football. With the football association, then they should and have to follow the Malaysia football standard, right? Same with rafting. It should have rafting association. Then that association can decide what standard or regulation that we should have, and what standard we should follow. Like that. But to be highlight here, as a general and for the whole adventure tourism industry itself, there are no specific license. No specific license required to run this business. Policy regarding the adventure tourism also no to be referred.

But for me, as a basic. If we want to form company (water rafting) for example. We should have at least sea water rescue. Because for this sea water rescue, there not only use in Malaysia, but all around the world. Because the syllabus is not only focusing on Malaysia use, but you can go anywhere in the world. Means international. Because those things also are came from oversea. Not from here. That the different. Should had that (sea water rescue). At least, in company should have one minimum. Considered that as a license. And then, also should have first aid. First aider. At least, CPR basic. Guides should have all those things. Better had. Because why, we didn't know when that situation can be happened.

We have 3 permanent staff here. Others are part time. So, for the part time guide we should snatch. Here, there are around 60 to 70 part time guide. We have total six operator here. Sometimes, its not enough. For example, if I get the early booking, then get payment from customer, so, I can book them early. So, another example, if I receive booking a week earlier, we cannot confirm to get the guide. Except weekdays. For weekend, we need to snatch. So quite pack in river (weekend).

So, to make sure all the activity can be run smoothly, we need to make sure that guides can communicate well. Not only communicate with the clients, but also with all of us. Communication between us.

R: Other than you manage the risk by using the experience, are you following any risk model?

I: So far, we have no model. Because as mentioned before, we learn more from the experience. We have no framework to follow. Yes no. But we do the paperwork and documentation. Usually, we teach all guide following the paperwork. The important things that we teach is, don't take risk too much. You should know your client background and you should know yourself. Don't take more than your capability. Then, you must know and become expert for each river. Expert means, even you are here, you can know other river at the different place and where or what risk for every river. That what we call expert. From that we can minimize the risk.

R: How is common injury happen to the participant during the activities?

I: For rating, if we said about cut or any injury, just once a year. Even just a small injury. But said about scratch something like that its common. Broken leg or hand, sometimes, 5 to 6 years only once happen. For trekking, it's become an injury risk because of the clients. Sometimes they have no fitness. But, as a guide, we cannot force them. Usually, as a guide we help them to not too rush. That's all. Then, environment. For environment, both activities are important. We should know environment for the that place. How the river condition. Sometimes, what we can do, not all clients can do. Anything cannot push. Because this industry does not like a team building. We are more to give the service. So, when we offer service, we cannot force any clients to do something. You can jump if you want. But we will not force you to jump. But if there are risk (to jump) well of course we will not allow that. For example, like activity this evening. We asked all of you to wear the safety jacket (at waterfall) even though some of you can swim. But we don't want that risk. That's the different between you go picnic by yourself with doing adventure activities with operator.

R: Can you explain a little bit about insurance for this business.

I: For us, yes, we have an insurance. But usually, insurance agent will be insured only for small amount. We understand, because of risk. So commonly certain insurance company insured only 50k. For this cover, certain company will cover for the broken case only. There are other company will cover the death case. This one cover all for the operator, guide, and clients. So, we will buy this insurance by a week. When there request or booking for the activities, we will buy the insurance.

For insurance, usually they will be insured in a small amount. Of course, we request for the higher amount. But of course, we cannot get the approval. They know our business activity. Maybe we can give the lower percentage of risk to them. But in their list and record, this business including in a high-risk business. But so far in 5 to 6 years, there are still no death incident. Hmm... so, the insurance that we have now, 20k for any serious injury, 25k for death, and 2k for the not serious injury like broken or any warded incident. But this one we need to pay or settle first by our own at hospital. We only allow to claim after that.

R: Do you have any legal team in this company? Do you think that it's important to have any legal team or legal related in this business?



I: Supposedly, have a legal team or any legal related is important. But we don't have association. So, if we have no association, it is quite difficult. For example, it is nice to say like, hey! Don't do this. Of course, other operator mad right? We should have association. Once all the term and regulations are agreed, then we can proceed. Then later, we can have guideline, standard. Means, like helmet (safety helmet). What kind of helmet that we can and should use? What standard? Like a PFD, what kind of bouncy that we should use. Minima bouncy. But if we have no association, everyone can get mad (if we asked to follow certain thing / use certain equipment). Association plays a main role. Why? Because all if operator will push / agree to join that association. Except, if we can deal (to standardize) with all operators in Malaysia. But quite impossible right to deal with the sensitive issues? For example. You only afford to buy boat from China. We cannot ask them to not buy boat from China. Cannot, right? Because they only afford for that. Other example, like a football. Football already has their association. So, all related to football in Malaysia need to follow the guideline given by their association. But if no association, there is no way. Who are you? Are you from government (authorize body)? Like canoe, they already have association. So, their association will handle things like this. What kind of rules that they can make? Example, helmet. They should wear certain helmet that meet certain specification. Like, full cover helmet. Other is safety jacket. Usually in oversea, they have their requirement minimum bouncy. Minimum bouncy should be 16. Highest bouncy is 27 floating level. But the minima need 16. Under 16 consider not meet the requirement to use in white water rafting. That's for equipment. But if we have no association, we cannot do that. If we have association, then we can control and then all the things can be standardized.

R: How about equipment? Criteria of equipment selection?

I: Actually, for the equipment we can decide by our own. However, we need to know the specification. Like the bouncy (PFD). But the essential equipment like helmet, we should make sure all in a good condition. Make sure the clip is function. Need to full cover or half cover. But for us here, we consider using full cover. Half cover the risk is higher. In Malaysia, lot of rocks in the river. From my experience, all guides were used the half cover before. When I fall down, and head hit to the rock. Whoa... so sore. This from experience. That's why we prefer to provide full cover helmet. But different river and different operator will provide different equipment. Operator or guide expertise also different. Big river will have their own expertise. Creek run river will have their own expertise.

So, if we want to standardize the certain things by our own, it's difficult. Like I mentioned before, there are any association or body can manage all these things. I can't say and decide for others operator, right? Cannot. For now, we only can share and for the new operator we only can advise based on the experience.

R: How is about briefing? How you do the briefing?

I: Usually, briefing process is not fix. Briefing, only 2 or 3 things that should be fix. Basic rescue technic, basic paddling. These 2 things are fixed. Other than that, based on the river condition. Every river has a different character. The basic, is rescue and paddling. It's the

same basic in any river. But for the additional briefing depends on river. Small run different, big river different. Only the two basics are similar. Any place. Forward, back paddle basic. Hold on all that. How to put paddle, depends on river character. That's additional. Rescue technic when boat fall down all that are similar.

R: Do you have emergency response plan? Can you explain about emergency procedure that this company was practice?

I: Yes, we have our own emergency response plan. Firstly, we need to calm down that person. If they feel sick or injured. If we have way to exit, then we took them to exit. But the most important thing, we should have first aid kit. Basic first aid should have in each boat. Certain operator has put in their boat. Certain operator is not. For us, like having broken injury that all of things, ok we can handle. But, for personal medication. We always asked and remind them. Like people that has asthma, or allergic. We always remind. If they have any health issue, please let us know. Because it was out of our control. Several times happened. They got asthma. But not inform us. Then leave their healer in the car. When boat falling down, they feel cold then their asthma came. So that things are out of our control. Participant own health condition. So, depends to operator how they control this situation.

In order to follow the international standard, we should has thrown bag for safety. Then we should have first aid kit, then basic rescue. Then leader management. Leader means like any team we need leader. Example, in one of the rapid. Although you are expert but if leader said don't pass the rapid. Means, no. That's our system. There is no concept for you ok, others guide no. If all guides need to do that, they should do. Something like that. Leader. If he said we should stop here, all guide and boat should stop. If he said don't fall down the boat, so they cannot do that.

R: If there are situation that you should cancel all the activities, how the procedure?

I: There are two categories. First, heavy rain. Water level increase. But at the level we still can rafting. So, we proceed. Second, heavy rain, water level increase, we cannot do rafting due to safety purpose. So, we will wait. Wait until the water head pass. Usually after two or three hours, the river going back to normal. Then after that we can rafting. Third, heavy rain. Water level increase. Cannot rafting. Until one day. 5 to 6 hours waiting, still cannot rafting. So, we need to cancel and refund. Or else, they willing to change their date. Means, if we feel that still ok to rafting at the certain level, we will proceed. Or we will ask client. Whether they are ok to raft. If they said ok, then we proceed. Or else, we just cancel. Anyway, insurance will not cover for any losses due to cancellation.

R: There any incident happens since you run this business?

I: So far, there are no serious incident happened since we run this business. But incident like and injury like broken were happened. Sprained and broken shoulder was happened before. But it still considers not serious injury. Consider minor. Death and fatality incident so far didn't happen.

When people asked, it is dangerous activity? Yes of course its dangerous. Even walking also dangerous. But we can minimize the risk. There are no things that have no risk right. But always minimize, minimize. From 10, minimize it can be 5, from 5 minimize it can be 1. That's all we can do. But we cannot say it not dangerous.

R: Last but not least, can you give some view and opinion about this industry in Malaysia? Have you heard about EMBOK? What do you think about implementation of specific risk management model to this industry?

I: For me, regarding the standardize or any model, its good. But as I mentioned before we need association or specific body to handle this. Like I said that things are good. If we can do the standardization, at least we can standardize the specification of equipment. Example specification of boat that we should use, how many boats can be run in river in one time. Like paddle, helmet. What kind of helmet. That good. The objective is to ensure safety for all participants. And then technic. Technic also important to standardize. Then we should impose of regulation. For example, entrepreneur should have at least sea water rescue certification before they can form the adventure tourism company. And then what criteria and certification individual should have to become a guide. Then how many years' experiences they have. But the experience not important for me. Because our industry will be limited. They can run business, but they need to hire person who has experience and expertise. At least. That's for operation. Then all activity that has been run by operator need to have specific standard and SOP. Another thing is communication. No need to good to communicate in English. But at least good in whatever communication. Because this industry more to offer the services.

Sorry, I haven't heard about EMBOK before. But I'm willing to get to know about that if it can give benefit to this industry as well as our business. Many things need to do to develop this industry actually.

## Appendix B Sample of EMBOK Matrix Used for Consultation

DOMAIN: Risk   CLASS: Compliance   Element: Codes, Regulation, Acts; Audit Safety; Qualification Requirement					
	Assess	Select	Monitor	Communication	Document
Initiation	Applicable act, regulation, codes related	Identify act, regulation, codes related	Act, regulation, codes need related	Act, regulation, codes policies	Written policies
	Applicable safety audit	What kind of safety audit require	Authorise body related	Audit safety guidelines	Written guidelines
	Accreditation need and guides qualification requirement	Role and responsibility	Accreditation and guides qualification requirement objectives	Accreditation qualification guidelines and recruitment policies	Set up guides data base
Planning	Act, regulation and codes requirement	Operation and organization strategy	Operation and organization process	Authorised body references	Organization and operational plan
	Safety audit requirement	Operation strategy	Operation process	Authorised body references	Audit checklist
	Accreditation requirement & qualification requirement	Selection criteria	Recruitment strategy	Certification, skill and knowledge requirement	Task description and role
Implementation	Requirement to comply with act, regulation and codes	Comply with act, regulation and codes	Continuously comply and keep updating latest policies	Policies and operation plan	Policies and operation plan
	Requirement to comply with audit safety	Comply with safety audit checklist	Safety audit schedule	Audit procedures	Audit checklist and record audit
	Certified guides and training	Type of qualification and training methods	Training schedule and renew certification	Training program	Task assignment and updating data base
Event	Act, regulation and codes compliance assessment	Operation procedure	Following operation procedure	Understanding standard operation procedure	Written policies, procedure and plan
	Safety audit compliance assessment	Safety check procedure	Following safety check procedure	Understanding safety standard procedure	Audit checklist and written procedure
	Supervision requirement	Certified and well train guides	Performance	Task assignment	
Closure	Compliance evaluation	Recommendation for next strategy	Align and update with latest policies	Policies learned	Written policies update
	Safety audit evaluation	Preparation for next safety audit	Keep updating with latest requirement	Further plan for audit of need	Audit record and recommendation for the next audit
	Performance evaluation	Performance evaluation criteria	Recognition programs	Guide performance	Update guide database
<b>Core Values</b>					
Creativity			- Find interesting ways to keep guide engaged throughout the yea		
Strategic Thinking			- Developed guides retention and advancement strategies - Seeks unusual and untapped sources for guides personnel		
Continuous Improvement			- Create policies and procedure for reference - Develop training procedure for skill improvement		
Ethics			- Crete standards of conduct policies - Distribute guides benefit equitability		
Integration			- Create checklist for task assignment - Ensure chain of command and channels of communication are clear		

## LIST OF PUBLICATIONS

Noorfaizah Md Zainudin, & Rahayu Tasnim (2020). Business Practices to Minimize Safety Risks: A Case Study of Two Adventure Tourism Businesses in Malaysia. *Business Management and Strategy*, 11(1), 40-54. doi: 10.5296/bms.v11i1.16090.

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