

RISK MANAGEMENT IN VIA FERRATA CLIFF CLIMBING TOURISM ACTIVITIES IN MOUNT MENDELEM, PEMALANG REGENCY

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Abstract

Today's tourism industry has experienced rapid changes due to the variety of tourists now wanting to obtain an authentic experience. In Indonesia itself, adventure tourism has become a prima donna since 2018 because it has brought 100,000 tourists from all over the world. This provides great economic value for the destination visited up to 67%. Via ferrata is one of the growing adventure tourism activities in Indonesia. Despite the high risk, this activity has a main market, which is the general public who want to experience rock climbing without having to have special abilities. In order to minimize these risks, it is necessary to have risk management so that the via ferrata can be made into extreme tourism but still safe for public tourists. The purpose of this research is to identify and find out the theoretical implications of risk management carried out via ferrata managers. Good risk management is applying industry management based on existing policies, standards, and procedures. The method used is qualitative descriptive with analysis using coding tools. Via ferrata does not yet have standard rules and SOPs. The new risk management is assessed based on the safety aspects of the safety equipment referring to the UIAA. All Mount Mendelem via ferrata operators do not have rock climbing certification and the existing SOP has not been written and the implementation is not suitable. Even so, in terms of security, the manager takes great care to create a tracking lane as an alternative to the down lane. So in this case the manager has applied the standards well but not yet for the policies and procedures used.

Keywords: risk management, risk, via ferrata, rock climbing, adventure travel.

A. INTRODUCTION

The current tourism industry has experienced many rapid changes because a variety of tourists now prefer to obtain a unique and authentic experience (Ardiwidjaja, 2018). The implications of the change in trends have an impact on the increasing demand for alternative types of tourism or special interest tourism (Soleimani, 2018). Adventure tourism is one of the tourism that is becoming a trend and one of the segments that experience the fastest movement of tourists (UNWTO, 2014). In Indonesia itself, adventure tourism has become a prima donna since 2018 because it has brought 100,000 tourists from all over the world. This provides a great economic value for the destination visited up to 67% (www.genpi.co).

Rock Climbing is one of the high-risk adventure tourism activities found in Indonesia. One of the easy rock climbing techniques, Via Ferrata, is becoming a growing tourist activity in Indonesia. Via ferrata or Klettersteig or iron path is a rock climbing path that has been prepared in advance with ropes and iron ladders planted on rock cliffs (Heise, 2016). The existence of this via ferrata makes rock climbing easier to enjoy even for the general public (Strohle et al, 2019: 2). One of the Via Ferrata is in Taman Rancah, Gunung Jimat, Mendelem Village, Belik District, Pemalang Regency. With a height of 1450 m above sea level and a length of 422 m, this Via Ferrata is the first and highest in Central Java. Although the target market is the entire community with certain criteria, basically this type of tourism is included in adventure tourism with

high risk. Moreover, this tourism is still classified as new in Indonesia and does not yet have standard regulations and SOPs, making the tourism activity not immune to the risk faced (head of FPTI Pemalang Regency. 2020). Lestari *et al.* (2022) mentioning that the use of natural resources in the implementation of ongoing tourism activities needs to be managed in a sustainable manner and have minimal impact. In order to minimize these risks and balance the desire of tourists to enjoy these activities, there is a need for risk management.

This research aims to identify and find out the implications of risk management theory, especially regarding the prevention of risks that could potentially harm tourists on the ferrata rock climbing route in Mount Mendelem, Pemalang Regency. This research, it is limited by only looking at the implications of risk management theory in an "operational" way, which looks at risk management from the side of internal activities.

Adventure Tourism The word adventure tourism originates from traditional outdoor recreation, which involves specific activities and skills in outdoor settings (Hall and Weiler 1992; Sung, Morrison, and O'Leary in Weber (2008: 67). (Swarbrooke, 2003) divides adventure tourism into two based on the level of risk, namely soft adventure and hard adventure. Via Ferrata is still included in the type of rock climbing tourism which has a high risk.

Rock Climbing Tour Via Ferrata According to (Diaz, 2018) via ferrata can be classified based on 2 criteria, namely criterion A based on the construction method (classic/professional) and criterion B based on its easy-to-reach destination and passing views (commercial). Equipment standards and the scale classification of the ferrata route refer to The International Climbing and Mountaineering Federation (UIAA) standards.

Risk states the occurrence of deviations from targets, goals, or expectations which may have an impact on losses due to the possibility of unwanted results (Bong, 2019). In the tourism industry, some people feel that they face risks more often and are more willing to face them (Cahyadi, 2014).

Risk Management According to (Attarian, 2012) risk management is to systematically apply the management of an organization or business based on existing policies, standards, and procedures to identify, analyze, authorize, maintain, and monitor or control risks that will occur. There are 3 stages of risk management, namely identification, evaluation, and risk control (Attarian, 2012).

To identify risks, (Attarian, 2012) says there are two theories used to identify the causes of accidents, namely the Domino theory by Heinrich (1936) and the Dynamics of Accident Theory by Hale (1983). Risk evaluation uses the potential frequency and severity of loss model risk evaluation model (Cuskelly & Auld in the book Risk Management in Outdoor and Adventure Programs, 2012: 6). Meanwhile, to control risk using a risk control strategy with due regard to policies, standards, and procedures.

The frameworks of visitor management activities performed by BBTNBT as Ranu Campsite area manager Kumbolo with theoretically perfect conditions were found to have shortcomings based on research findings (Tri Octavia, 2022). The management goals of BBTNBTS have been established for area function and protection of diversity in life, including the effects of loss of vegetation, soil compaction, disturbance of trees and wildlife, and garbage disposal. However, creating standards that must be met in order to be maintained is not a feature of goal management.

B. RESEARCH METHOD

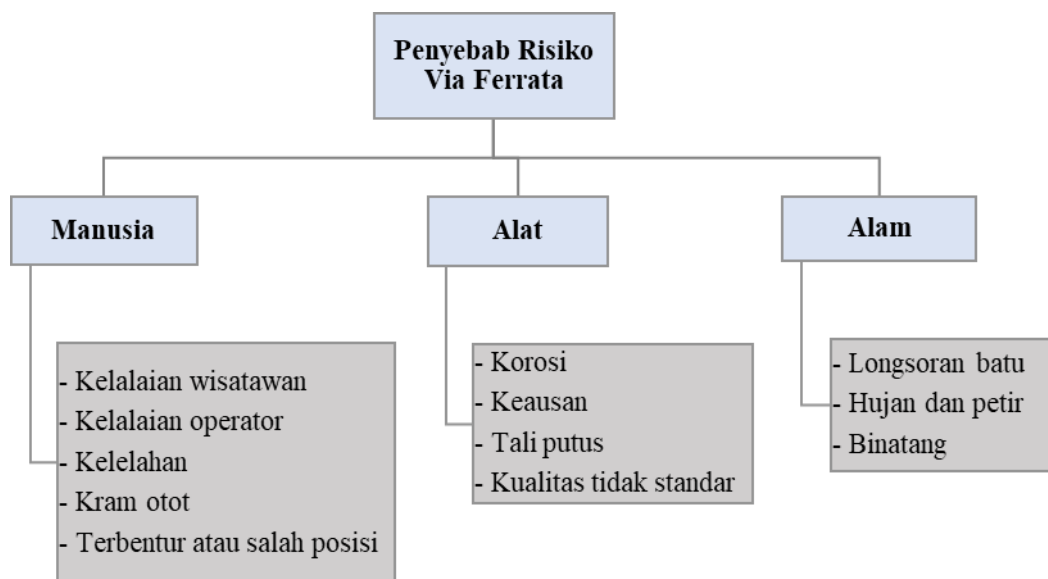
This research uses qualitative descriptive methods. The participants involved in this research are the managers of Taman Rancah Adventure Park, FPTI (Indonesian Rock Climbing Forum) District. Pemalang, and academics from Bandung Tourism High School Lecturer. The data collection methods used are observation, documentation, interviews, and literature studies. The analysis method used is

descriptive with an interactive analysis technique that is by reducing data, presenting data, and drawing conclusions and or verification (Miles and Huberman in Sugiyono, 2012:246).

C. RESULTS AND ANALYSIS

Mount Mendelem's via ferrata in figure 1 route has levels of difficulty ranging from class A with the easiest level to class C/D with the most difficult level. The majority of the difficulty level of the Via Ferrata on Mount Mendelem is in class B, which is moderately difficult

Figure 1. Via Ferrata Risk Causes



Source: Informant information, 2020

The manager did not record any incidents that had happened, so based on interviews with the manager, operator, and head of FPTI, the incidents that had happened on the via ferrata of Mount Mendelem were; 1). Tourists slip due to slippery footwear and the victim is not injured (just shocked) and then continues the activity; 2). Muscle cramps in the legs often occur in tourists, especially when going down; 3). Injuries from bumping into something while climbing the via ferrata. The resulting wound is small and tends not to require serious treatment; 4). Rain and lightning are risks often encountered via ferrata Mount Mendelem. The incident that occurred did not pose a serious risk to the victims because the manager immediately carried out the evacuation as soon as the weather suddenly became unfriendly.

These types of risks should be understood by tourists before enjoying the ferrata tourist activity. After the identification of risks both from library sources and occurring directly on-site. Managers conduct evaluations to create strategies to minimize and avoid these risks.

Table 1. Risk Evaluation

Risk	Cause	Follow up
Slip and fall	Tourists neglect to use safety equipment	Avoid
	Tourists use slippery footwear	Retain
	Functional failure of tools due to corrosion of iron, broken ropes due to wear, and substandard equipment quality	Avoid
Fatigue and fainting	Have not eaten	Reduce
	Lack of energy	Reduce
	Health problems	Avoid
Muscle cramps	Less warming	Reduce
Injured	Crashed or misplaced	Retain
Rock avalanche	Cause injury to slip	Transfer
Lightning	The electric field that hits the iron results in electrocution	Avoid
Rain	Water makes iron slippery	Avoid
Animal	Cause panic	Retain

Source: Researcher's Preparation, 2020

Description:

- Retain : low frequency, low injury rate. There are risks but the activities are still carried out
- Reduce : high frequency, low injury rate. The level of risk is reduced
- Transfer : low frequency, high injury rate. The location was moved and the activities continued
- Avoid : high frequency, high injury rate. It is better to avoid, forcing activities not to be carried out

After the risk evaluation is done, the next step that the manager takes is to control the risk.

In its implementation, on the policy aspect, administratively the manager has completed all legal documents related to the illegality of the business. These documents include the management structure of Rancah Park recognized by the organization Shababana and FPTI, tourism business permit, cooperation with the land owner namely Perhutani KPH Pekalongan Timur, taxation, and cooperation with insurance. Managers always inform travelers of danger warnings.

In terms of standards, the equipment standards used by managers refer to UIAA standards. While the standard rules related to the conditions of tourists who can climb via ferrata and good climbing techniques do not yet exist both internationally and nationally. So that the manager makes his own rules related to that. The operators are always routinely trained at least once a month. The age of tourists who can ride via ferrata is 8 to 70 years as long as they are not afraid of heights and are healthy and have no history of heart disease. The number and conditions of tourists are used by operators in regulating the ratio of the number of operators and tourists where 3:1 is the maximum and 1:1 with certain conditions.

The Standard Operating Procedure (SOP) used by the manager still refers to the SOP on rock climbing for tourism. There is no standard SOP related to via ferrata yet, even for tourist SOP for

rock climbing. However, in its implementation, not all SOPs have been implemented such as evaluation by tourists at the end of the activity which is not always done.

Discussion

Risk Management Plan for the Via Ferrata Tourism Activity of Mount Mendelem Based on (Diaz, 2018) entitled Guide for the Design and Calculation of Via Ferrata, the via ferrata of Mount Mendelem is included in type B which means that the via ferrata is made for a specific purpose in other words tourism. So that the via ferrata route is made easy and passes through good scenery for tourists.

a. Policy

Based on the findings above which state that the manager has cooperated with the insurance. With this, the manager has fulfilled the rights of tourists in Law No. 10 of 2009 article 20 which states that tourists are entitled to security protection with insurance. So in this case the manager has applied policy indicators as one of the steps in his risk management plan.

b. Standard

Table 2. implications of safety equipment standards

No	Findings	Theory
	Tali lanyard diameter ± 10 mm, panjang 10,5 m, beban jatuh 300 kg	Tali lanyard diameter $12 \pm 0,1$ mm, panjang 12 m (UIAA, 2018)
	Energy absorbing system (EAS) model V dengan menggunakan tali karmantel	Energy absorbing system (EAS) model Y yang menjadi kesatuan via ferrata set.(UIAA, 2018)

Source: Researcher's Preparation, 2020

The mismatch in table 2 is because the size of the rope with a diameter of 10 mm is adapted to the proportions of Indonesians. Europeans use a size 12 rope because their average weight and height are different from Indonesians. Until the size of 10 mm is enough for Indonesians. This has become an unwritten rule for Indonesian rock climbing safety equipment standards.

Although the EAS model is different from the standard, this model has gone through the quality control process from FPTI. Until this equipment has been tested for safety. Regardless of that, the via ferrata manager of Gunung Mendelem has applied via ferrata standards according to the UIAA and adapted them to the needs of Indonesians.

c. Procedure

With the absence of this SOP, ferrata activities do not have clear rules. It is not standard that this via ferrata SOP could cause debate among ferrata activists themselves and make this via ferrata SOP not immune to the law.

1. Implementation of Risk Management on Mendelem Mountain Via Ferrata Tourism Activity
 - a. Management policies

Table 3. Contract sub-indicator implications

No	Findings	Theory
1	Via ferrata managers do not use agreement documents on tourists.	Managers and tourists need to sign an agreement document Attarian (2012: 18)

Source: Researcher's Preparation, 2020

Managers have not applied contract indicators as one of the documents required in risk management in table 3. The non-compliance is because according to the manager, tourists who make reservations are considered to have understood the risks they will face and are willing to follow the procedures directed by the operator.

Table 4. Torts Law sub-indicator implications

No	Findings	Theory
2	There is no certified operator	Each driver has certification (Attarian, 2012: 21)

Source: Researcher's Preparation, 2020

This mismatch is because, according to the manager, the certification is difficult to obtain due to cost constraints in table 4. Although until now there has not been an incident, but the lack of certification on the driver will make it difficult manager in law. Although in terms of quality, non-certified operators are not necessarily inferior to certified ones. So the via ferrata operators of Gunung Mendelem who are not certified can be said to be unsafe in the eyes of the law.

Table 5. implications of the Due Diligence sub-indicator

No	Findings	Theory
3	The manager does not check the medical history form	The driver must carefully check the medical history form of all clients (Attarian, 2012:21).

Source: Researcher's Preparation, 2020

This non-compliance is because according to the manager, asking tourists to bring a medical history form to prove that the tourist meets the conditions will burden the tourist. the availability of a tourist form that states that he is healthy will further guarantee that the tourist meets the tourist criteria. So that even the manager will be safe in the law if unwanted things happen in table 5.

Table 6. Implications of staff manual sub-indicators

No	Findings	Theory
5	The manager has not made a staff manual for drivers. Just a soft file in the form of driving procedures starting from before-during-after climbing the via ferrata.	Each activity should create a staff manual to provide guidance to drivers (Attarian, 2012:27).

Source: Researcher's Preparation, 2020

In table 6 incompatibility is due to the inability of the manager to create the staff manual. So that in the absence of this staff manual, managers can be considered negligent in training their operators because they do not provide clear and written technical instructions.

Table 7. Implications of procedural sub-indicators

No	Findings	Theory	Cause
	The manager does not review the health insurance that the participants have.	Reviewing the health insurance information of the participants in the SOP pre activity (Attarian, 2012:30)	Managers consider it too personal and will prolong the procedure
	Don't always plan the food menu.	The manager plans the menu and buys food on the SOP pre activity (Attarian, 2012:30).	Because the time needed to go up the via ferrata is not that long if you only get to stage 1 or stage 2 and then go down again
	Evaluation with tourists is not always done by the operator.	Managers evaluate staff on SOP post activity (Attarian, 2012:30).	If there is an initiative to deliver criticism and suggestions from tourists, the operator will accommodate it and evaluate it with the entire manager. Based on the interview with the chief manager and operator, the evaluations submitted by tourists so far are still in the form of supporting facilities, facilities and infrastructure that have not been met.

Source: Researcher's Preparation, 2020

Regardless of the reasons, by checking the availability of personal insurance for tourists, it indicates that the manager is not detailed in anticipating the risks that occur.

Table 8. Implications of sub-indicators of environmental conditions

No	Findings	Theory
10	The via ferrata technique is to go down the stairs (stage 1 and 2) and through the tracking path down Mount Mendelem (stage 3: peak)	Via ferrata descent technique with rappelling (UIAA & FPTI)

Source: Researcher's Preparation, 2020

However, with this down tracking technique, managers are able to minimize risk as well as energy and time.

D. CONCLUSION

On the indicator of management policies, administratively, the legalization of the management's tourism business has been completed. However, documents such as operator certification, agreement documents of both parties and security supporting documents between managers and tourists have not been completed. Procedurally, the manager has a via ferrata SOP made by the manager himself. Although there are no standard SOP via ferrata rules, the SOP is sufficient to anticipate the risk of via ferrata. However, in its implementation there is still inconsistency with what is written in the SOP.

The manager does not yet have a handbook for operators for which the document is needed as an accountable archive. In terms of device safety standards, the manager has met the standards and it has been proven that there have been no fatal incidents during the 3 years of operation. The manager's initiative in making an alternative path down with tracking adds safe value in risk management.

Implications

The agreement documents of both parties have not been completed and the medical history form has not been checked. Despite complicating the process, the document will save the manager if one day there is a lawsuit from an unwanted incident; There is no certified operator yet. The deficiency will be fatal because this certification will prove that the operator has the ability recognized by law; There is no operator's manual yet. It is useful as an operator's learning media so that the operator's ability is not in doubt because he adheres to clear guidelines; There is no routine evaluation schedule yet. Although it does not have to be done every day for certain reasons, managers need to schedule evaluations on a routine basis. For example a week once. With the evaluation routine, it proves that the manager always tries to improve what is lacking; The Standard Operational Procedure (SOP) has not yet been documented. It cannot be interpreted that the manager has a patented SOP that is approved by all parties; The manager provides a via ferrata descent route with tracking. The standard descent via ferrata is by rappelling and/or going back down an iron ladder. This is a management initiative to minimize risk.

Suggestions

For the manager: 1) need to make a via ferrata guidebook and document the SOP; 2) Training how to drive tourists. When the operator brings tourists not only feel the sensation of going up the iron stairs, but also get interesting stories about the area around Mount Mendelem; Further research: related research can be done but seen from the tourist's point of view and also the lack of in-depth interviews with all operators to ensure that they understand the risks well and the anticipatory and handling procedures.

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