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**FACTORS THAT INFLUENCE TOURISM RECOVERY, POST DISASTER EARTHQUAKE IN SEMBALUN SUB-DISTRICT, EAST LOMBOK REGENCY**

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**ABSTRACT**

The impact of the earthquake in Lombok Island not only had an impact on community settlements, but also on tourism activities. Especially in Sembalun District, East Lombok, the impact can kill the economy of the community, since tourism is one of the main livelihoods of the people. The process of tourism recovery in Sembalun District shows different progress. Therefore, the purpose of this research is to compare the tourism performance before and after an earthquake—which was analyzed using comparative descriptive method. Furthermore, the next goal is to describe the recovery process of tourism in the aftermath of an earthquake, and identify factors that influence the achievement of tourism recovery using descriptive analysis. Based on the results of each purpose, it shows that there are several differences in the tourism performance before and after the earthquake; either it has better performance after the earthquake or worse. The process of tourism recovery is carried out differently— depending on the damage level. Nonetheless, there are several tourism objects that have not been recovered, such as Bale Adat. There are 4 factors that affect tourism recovery after an earthquake; physical factors, economic factors, social factors, and unique cultural factors.

**Keywords:**

Earthquake, Tourism, Recovery, Factors

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**1. Introduction**

Indonesia is a country where natural disasters often occurred annually since it is located in the path of the Pacific Ring of Fire. This condition ultimately impacts the frequent occurrence of disasters in Indonesia. Based on these conditions, a well-prepared disaster management is necessary. In the law No. 24 of 2007 stated that disaster management is a series of efforts that include the establishment of development policies of a high-risk disaster, disaster prevention activities, emergency response, and rehabilitation. In addition, disaster management must also be based on practical principles; fast and precise, priority, coordination and integration, efficiency, transparency and accountability, partnership, empowerment, non-discriminatory, and non-proselytical. Natural disaster management consists of mitigation, readiness, response, and recovery (Sugito 2008). According to Heriyanto (2015), stated that stages to manage disasters properly and safely consist of (1) pre-disaster which includes readiness, early warning, mitigation, (2) during the disaster as in emergency response, (3) post-disaster includes rehabilitation and reconstruction.

The post-disaster tourism recovery process in Sembalun District shows different results at several tourism sites. There is tourism that shows better development after the post-disaster recovery process compared to conditions before the earthquake. These conditions are referred to Mount Rinjani tourism, which creates better post-disaster recovery. Another condition that has been shown from the post-disaster tourism recovery is; no changes have arisen, unless there is an after-disaster tourism and recovery process which led the tourism to shut down. Such conditions occurred in the tourism areas of Bukit Selong, Bale Adat, and Tree Houses in Sajang village. The results of the post-disaster tourism recovery show that each recovery implementation has produced different progress in several tourism destinations. Based on conditions that have been explained in the background, Heriyanto (2015) elaborated that stages to manage disasters properly and safely consist of (1) pre-disaster which includes readiness, early warning, mitigation, (2) during the disaster as in emergency response, (3) post-disaster includes rehabilitation and reconstruction.

Disaster management efforts in tourism areas have

differences with ordinary residential areas, which led them to have different disaster management strategies. The post-disaster handling process will have different impacts according to different recovery times, hence it takes optimal implementation in mobilizing the resources owned and controlled which is an internal part of people's daily lives (Paripurno, 2006). Based on these explanations, this research aims to compare tourism performance before and after an earthquake, describe the recovery process of tourism in the aftermath of an earthquake, and identify the factors that influence the success of post-earthquake tourism recovery.

## **2. Literature Review**

### **2.1 The Concept of Disaster Tourism**

Disaster tourism refers to tourism activities related to the disasters that occurred, as well as the trauma produced, using the disaster events as one aspect to attract tourists (Gotham, 2017). Disaster tourism has been criticized because it is considered to show something that is not supposed to; by offering tourists how disaster has occurred (Miller et al., 2006). The concept of disaster tourism usually emphasizes socially constructed tourism from disasters and the recovery which has been done at the disaster site (Gotham, 2017).

According to DeMond Shondell Miller (2008) disaster tourism aims to show tourists how the disaster happened and what was felt by the people there during that time. Tourists who come will feel how the disaster happened, thus it can become one of the interesting tourist attractions. This is done because disasters can disrupt business distribution, especially businesses that are vulnerable to disruption of electricity, communication, infrastructure and one of them is the existence of a tourism business (Harrald, 1999) so that the holding of disaster tourism, the tourism business can continue.

Disaster tourism can exist because after a disaster occurs, government tries to expel the negative impression of the disaster, so the stigma will be neutralized and promote tourism with various marketing (Gotham, 2017).

### **2.2 The Concept of Post-Disaster Tourism Recovery**

The component of post-disaster tourism recovery has the same stages as post-disaster recovery in general. The longest period of recovery from a devastating disaster requires several supplies. Each category of needs depends on each other and if there is interrupted need, and then it will have an impact on other needs. The recovery components are (Coppola, 2007: 302);

#### **1. Planning**

Post-disaster planning is a distinct action that impacts the environment before a disaster occurred. An important step that can be taken in planning is to conduct a basic survey with hazard analysis, to be able to determine what necessities are needed. Another important thing in planning for recovery is the efforts to improve construction or other long-lasting actions that can sustain people's lives (Gustin, 2005: 147).

#### **2. Coordination**

Coordination while carrying out the recovery process is difficult to achieved. But it is vital to succeed the goals of the recovery effort while reducing the risks involved. The success of coordinating post-disaster recovery efforts

depends on the ability of the planner to achieve a broad picture in the coordinated structure (Schneid and Collins, 2001: 39). In coordinating, a good two-way communication is needed between the recipient and the sender. Without these two things, good coordination will not be achieved. Good communication makes everything related to the recovery happens safely (Gustin, 2005: 46). Recovery plans are used to address community demographics and social culture needs, all groups of people must be involved, including religious leaders, civil society organizations, the private sector, government, and the media. This allows interaction between local and regional or possibly international parties through the recovery process, thus, the inclusion of these parties is crucial.

#### **3. Damage Assessment**

Subsequent assessments will make it possible to obtain the information needed, and such assessments will need to be carried out by various expert fields to determine actual recovery needs. For example, in some cases technical inspection of building damage needs to be done in order to determine whether it needs to be destroyed, repaired, and which needs to be done as soon as possible.

The recovery effort planner will need a periodic review of the affected area to determine the time needed to restore the area. In this assessment effort, all types of resources need to be reallocated and the problems are found before it is too late to fix. With a good coordination mechanism and maximizing the number of organizations that are participating, the assessment effort will be easier to do.

#### **3. Fund and Equipment**

Without sufficient funds, it will be difficult to restore an affected area although many local and international volunteers provide equipment and supplies. Financial investment in the reconstruction of a community is needed to meet targets for recovery efforts such as repairing and rebuilding destroyed buildings, restarting the economy or other activities. The responsibility concerning on reconstruction funds is determined by various sectors in the community (Rittinghouse and Ransome, 2005: 13).

#### **4. Role of the Government during Recovery**

Systems and tools that governments have to overcome the dangers that occur in society tend to be relatively the same throughout the world. Although each disaster management organization in each country has developed independently from a variety of resources, in addition, globalization has facilitated the standardization of practices, protocols, and tools used by disaster management organizations.

### **2.3 The Concept of Disaster Tourism**

Tourism performances are assessed using the tourism components of Gunn and Turgut Var (2002) us, as follows:

1. Attractions; the impression of a tourist attraction so that it can be visited by tourists. With this, tourists will be appealed, and reasonably it becomes a major component of tourism.
2. Amenity; supporting tourism facilities as in hospital, shopping center, prayer room, and parking lot.
3. Accessibility; easy to reach the location of tourist attractions, regarding on transportation to reach the attractions, the path, the safety, and comfortable access to the location.
4. Accommodation; available facilities prepared in the

tourist attraction, such as restaurants, food stalls, souvenir shops, hotels, and others.

5. Promotion; either be done by the locals or the government and private business. Promotion is done through several ways, such as putting on an advert or giving discounts to the attractions.

### 3. Research Method

In this research, the analysis technique used is the double mix method analysis technique; qualitative analysis and quantitative analysis which are explained as follows.

#### 1. Descriptive Comparative Analysis

It was used to discuss the first objective, which is comparing between components performance in pre and post-disaster tourism. The steps that were used are:

- a. Describing the availability and condition of tourism performance variables before the earthquake including variables of attractions, amenities, accommodation, accessibility, and promotion.
- b. Describing the availability and condition of tourism performance variables after an earthquake that consists of variables of attractions, amenities, accommodation, accessibility and promotion.
- c. Comparing tourism performance before and after the earthquake disaster on each variable, with the following comparison format.

#### 2. Descriptive Analysis

This analysis method was used in the second and third objectives. The second objective is to describe the process of recovery in post-disaster tourism; therefore, descriptive analysis was used to explain the stages carried out in the recovery of tourism in each tourist attraction. The data used were qualitative and quantitative data. Qualitative data were processed by describing the recovery process that occurred, whereas quantitative data were supporting data that were processed through mathematical calculations, i.e. the sum and percentage. The steps taken to analyze the 2<sup>nd</sup> objective were by determining the recovery phase and explaining the process of each stage. In addition, descriptive analysis on the 3<sup>rd</sup> objective was used to analyze factors that influenced the process of tourism recovery.

Moreover, the recovery factors that had been determined are mainly economic, social, physical and cultural factors—each of which has indicators to be assessed. Furthermore, data from the field through the results of interviews were obtained by describing each factor and dividing it into supportive factors, factors that inhibit and factors that did not affect post-disaster tourism recovery.

## 4. Results and Discussions

### 4.1 An Overview of Lombok Earthquake in 2018

The earthquake that occurred in Lombok was a series of earthquakes that began on July 29, 2018 with an earthquake magnitude scale of 6.4 on the Richter scale (SR), where the earthquake on that date was referred to as a foreshock (preliminary earthquake). One week later, on August 5, 2018, another earthquake occurred with its magnitude scale in 7.0 SR, which then referred to the first mainshock. On August 9, 2018 there was another earthquake with a magnitude of 6.3 SR which was called a significant aftershock. On August 19, 2018 there were two earthquakes in a day, which were preceded by a foreshock with a power scale of 6.3 SR and a second mainshock with

a scale of 6.9 SR ten hours afterwards.

Based on the 2018 East Lombok Regency Tourism Sector Value Chain Study, the earthquake disaster in West Nusa Tenggara Province resulted in 564 deaths, 1,584 people were injured, and 396,032 residents were displaced. The damages were also impacted to large-scale infrastructure and facilities such as: 188,139 residential houses, office buildings, land transportation infrastructure, water resources infrastructure, health facilities, education, places of worship, hotels, shops, and various public facilities.

The earthquake in Lombok had an impact on the decline in economic growth by 1.5%. The decline in economic growth was predicted to increase the number of unemployed by 180,000 people in 2019. This unemployment is estimated to come from the tourism, trade, agriculture, and industrial sectors. In addition, the NTB poverty rate in March 2018 which was recorded at 14.75% was estimated to increase to 15.88% in 2019.

One of the important sectors to consider in this case is tourism, which was previously a part of other sectors that have high potential and reliable to support the economy of the community in recent years. One of the tourism destinations in the northern part of East Lombok, East Lombok Regency was experiencing paralysis that results in the community's economy and would cause mass poverty in people who have high dependency.

### 4.2 The Impact of the 2018 Lombok Earthquake Disaster on Tourism Sector

Based on the Study of the Lombok Earthquake Series in West Nusa Tenggara Province, the earthquake on July 29, 2018 also triggered the occurrence of land movements or landslides in Mount Rinjani climbing route. Small dimension land movements were observed in residential areas in Ketapang, Madayin Village, Sambelia District. Based on the observation of the Earth Movement Emergency Response Team (TDGT) - PVMBG, cracks were found on the hiking trail starting at Post 4 in Penyesalan hill to the starting point of Plawangan. Cracks were found mostly along the path in the general direction southwest-northeast to west-east. Further, several new ruins that occurred due to aftershocks were found.

On Friday (August 3, 2018) around 3 o'clock in the morning, with the existing crack conditions, there was still the potential for landslides and rock collapse around the hiking trail, Plawangan, and caldera walls, as well as walls that have experienced cracks.

In addition to the damage on the hiking trail, physical impacts are also occurred on other tourism objects in Sembalun District, such as destruction in Bale Adat, Petilasan Gajah Mada, Bukit Selong (Selong Hill), and the Sajang Tree House, as well as conflict management arouse from community groups by closing and burning tourist attractions.



**Figure 1. Cracks and Landslide Potentials in Springs**

Source: Study of the Lombok Earthquake Series in West Nusa Tenggara Province



**Figure 2. Destruction on Tourism Object in Sembalun District**  
 Source: East Lombok Regency Tourism Sector Value Chain 2018  
 Review and Survey Documentation

Apart from the physical damage, the earthquake also had an impact on reducing the number of tourists, especially climbers on Mount Rinjani National Park. The level of foreign and domestic tourist visits based on data from the Mount Rinjani National Park between 2017 and 2018, shows a declining trend even though there has not been an earthquake. In 2017, there were 39,659 thousand foreign tourists, and 43,120 domestic tourists, with a peak season of tourist arrivals from April to October with an average of more than 4,000 foreign tourists every month while domestic tourists peaked in April with a total of 13,692 people. In 2018, until July before the earthquake, the number of foreign tourists was 19,158 people, based on the peak season from April to July. The following data is the number of tourists in the Mount Rinjani National Park in 2017 and 2018.

**Table 1.** Data on the number of tourists in the Mount Rinjani National Park in 2017 and 2018

No.	Month	Foreign Tourist		Domestic Tourist		Total	
		2017	2018	2017	2018	2017	2018
1.	January	56	119	1,217	625	1,273	744
2.	February	10	11	601	852	611	863
3.	March	23	-	528	-	605	-
4.	April	3,188	3,958	3,294	4,848	6,482	8,806
5.	May	4,839	5,067	5,085	4,698	9,924	9,765
6.	June	4,031	3,852	887	9,229	4,918	13,057
7.	July	6,623	5,326	13,692	6,046	20,315	11,372
8.	August	8,852	849	7,253	284	16,105	1,133
9.	September	5,069	0	4,469	0	9,538	0
10.	October	4,240	0	2,441	0	6,681	0
11.	November	1,384	0	1,327	0	2,711	0
12.	December	1,344	0	2,272	0	3,616	0
<b>Total</b>		<b>39,659</b>	<b>19,158</b>	<b>43,120</b>	<b>26,582</b>	<b>82,779</b>	<b>45,740</b>

Source: Value Chain Study of East Lombok Tourism Sector in 2018

### 4.3 An Overview of the Research Sites

It is located in Sembalun District, one of the districts in East Lombok Regency which has an area of 217.08 km<sup>2</sup>, consisting of 6 villages; Sembalun Village, Sembalun Timba Gading Village, Sembalun Bumbung Village, Sembalun Lawang Village, Sajang Village, and Bilok Petung Village.

Choosing the research tourism objects is based on recovery achievements; excellent, good, bad or even closing the tourism sites since there is no recovery action. After grouping the tourism objects according to these categories, one tourism object from each category is selected as follows: Mount Rinjani, Bukit Selong, Sajang Tree House, Bale Adat.

#### 1. Mount Rinjani National Park

Mount Rinjani is the most famous tourist attraction in Sembalun District, the existence of Mount Rinjani is one of the incomes for the community, especially after being designated as UNESCO Global Geopark. Mount Rinjani is one of the tourism objects affected by the earthquake; in the form of physical impacts, social impacts, and economic impacts. The physical impact of it can be seen from the damage made on tourism support facilities. On the other hand, the social impact creates trauma which felt by managers and tourists that led them scared to climb on Mount Rinjani. Further, the economic impact affected on the closure of tourism objects, causing a decrease in the number of tourists and decreasing income.

As a tourism object that has great potential for Sembalun District and East Lombok Regency, an attempt was made

to improve and restore tourism after the disaster. These efforts have shown results that can be seen by the reopening of Mount Rinjani, as well as additional new supporting facilities, such as climbing posts and reformed hiking trails.

#### 2. Bale Adat

Bale adat is one of the cultural tourism located in Sembalun District, precisely in Sembalun Lawang Village which is adjacent to Bukit Selong. However, the management of Bale Adat and Bukit Selong are different. Bale Adat is a cultural tourism preserved by the government, thus, its management is carried out by the East Lombok Regency Culture Office. The impact of the earthquake on the Bale Adat was physical damage, mostly destruction to some building structures made of bamboo and reeds—making it vulnerable to disasters.

There has been no recovery effort made by the government to restore tourists' impression coming to Bale Adat. Recovery efforts have not been made as the building of Bale Adat is different from other tourism; in order to make the recovery effort does not change the cultural significance of Bale Adat.

#### 3. Bukit Selong (Selong Hill)

Bukit Selong is a tourist attraction located in Sembalun Lawang Village. This hill has a magnificent natural potential where tourists can enjoy the panoramic scenery of rice fields and beautiful Pegasingan hills. This tourism is also included in objects affected by the earthquake. The impact is created in the form of damage to attractions, such as the collapse of the building—which was used as a photo spot,

as well as destruction to supporting facilities that cannot be reused.

The management of Bukit Selong initially caused conflicts among the youth groups, which led to the delayed recovery process. Nonetheless, deliberation and agreement of all youth were reached and formed the Tourism Awareness Group (Pokdarwis). The establishment of this Pokdarwis supports the restoration of the tourism object of the Bukit Selong, which can be seen from the reopening of the tourism object—although there has been no improvement to the supporting facilities.

4. Sajang *Glamour Camping*

Sajang Glamour Camping is one of tourism objects as well as camping area with luxurious outdoor facilities. It is located in Sajang village, Sembalun District, East Lombok Regency. People can go to the place through North Lombok (Bayan) or East Lombok (Aikmel), and it takes around 3-4 hours from Mataram city.

Before the earthquake, Sajang Glamor Camping was a tree house. Sajang tree house is a tourism object located in Sajang Village, and also part of a new tourism object which is affected by the earthquake. Sajang tree house was built from woods; hence, it was vulnerable when an earthquake

strikes. The physical building of the tree house was ruined, and dangerous if it was used as a tourism site. The manager does not make it a priority to fix it since there were not many tourists coming even before the earthquake. The explanation shows that the recovery effort that was carried out for the tourism object of Selong Hill was bad, since this location is closed after the disaster.

4. 4 Analysis of Tourism Performance

Analysis of tourism performance was done by comparing the performance of tourism before and after an earthquake. In this research, tourism performance was analyzed using the theory of tourism components from Gunn and Turgut Var (2002); attractions, amenities, accessibility, accommodation, and promotion. There is an assessment indicator in each tourism component. Tourism performance assessment were grouped into three categories; those are increased tourism performance category—which means that after the earthquake, tourism performance indicator X increases, then, decreased category if after the earthquake tourism performance indicator X decreases, and lastly, remained category which means zero change in indicators X after the earthquake.

Table 2. Comparison of Increased Tourism Performance Indicators after an Earthquake Disaster

Indicators	Mount Rinjani National Park			Bale Adat			Bukit Selong			Sajang Glamour Camping		
	Increase	Decrease	Remain	Increase	Decrease	Remain	Increase	Decrease	Remain	Increase	Decrease	Remain
1. Natural attraction			√			√		√		√		
2. Social attraction						√			√			√
3. Cultural attraction	√				√				√			√
4. Hotel/Villa/guest house/inns		√			√			√		√		
5. Restaurants			√			√			√	√		
6. Local product showrooms			√			√			√			√
7. Road condition	√					√			√			√
8. Hiking trails condition /Route		√				√			√	√		
9. Parking lot	√				√			√		√		
10. Local Transportation			√			√			√			√
11. Toilets	√			√			√			√		
12. Rest area	√			√			√			√		
13. Places of worship	√			√			√			√		
14. Counters/ ticket windows			√		√			√		√		
15. Tour guides	√			√			√			√		
16. TIC (Tourism Information Center)			√		√			√		√		
17. Signpost Information (signboard)	√				√			√		√		
18. Tourism web availability			√		√				√			√
19. Advertising installation			√	√			√			√		
<b>Total</b>	<b>8</b>	<b>2</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>13</b>	<b>-</b>	<b>6</b>

Based on the identification results of tourism performances that have been carried out on four attractions, it is found that there are indicators that show an increase, remain, and decrease. The condition of tourism performances on each tourist attraction shows different results. But the results of the analysis found that the indicators of toilets, rest areas, places of worship, and

tour guides in each tourist attraction show an increase in tourism performance. The equation of increasing the indicators for the four attractions is because there are indicators that can be used by the four attractions. The rest area and tour guide, both indicators can be used by all visitors who come to the tourist attraction. This condition is due to the two indicators provided to facilitate all visitors

who come to Sembalun District. As for the indicators of toilets and places of worship, there are in two tourist attractions, namely Bale Adat and Bukit Selong where visitors of both attractions can both use the same toilets and places of worship.

On the signpost indicators that have increased are Mount Rinjani National Park and Sajang Glamor Camping. The conditions occurred because the signposts in these attractions are damaged so that when no improvement is made, it will affect the safety of visitors. Then for the advertisement indicator, the increase occurred in three tourism objects namely Bale Adat, Bukit Selong, and Sajang Glamor Camping. This increase occurred because of the earthquake disaster, the number of the visitors of these three tourism objects decreased drastically, so that advertising media is one of the strategies chosen.

However, there are also indicators that have not increased in every tourist attraction, namely social attraction, local product showrooms, and the availability of tourism web. Based on these findings it can be seen that

in the four tourism objects in the Sembalun District, there has been no innovation made on tourist attractions. Local product showroom does not experience an increase because existing conditions in Sembalun district has no showrooms that could be utilized by the community. Then for the tourism web that is managed to be used by all tourism businesses are not yet available, so tourism businesses only use social media to promote tourist attraction.

#### 4.5 Identification of the Tourism Recovery Process

Identification of the recovery process of tourism after the earthquake was done using the theory of the components of the recovery efforts from Coppola (2007: 302). The components of recovery efforts consist of planning, coordinating, assessing damage, fund and equipment, and the role of the government during recovery. Identification of the tourism recovery process carried out at each tourist attraction.

**Table 3.** The Process of Recovery of the Mount Rinjani National Park in the Aftermath of the Earthquake

No.	Component of Recovery Efforts	Tourism Sites			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang Glamour Camping
1.	Planning	<p>- Planning done first at the Mount Rinjani National Park is to close the hiking trail, but in 2019, the hiking trail was reopened but the climbing peak was limited only to Plawangan or post 4, climbers cannot climb to the top of the mountain or Lake Segara Anak due to land conditions or geology is still very vulnerable and it is also to reduce the risk of environmental damage.</p> <p>-Planning here are the follow-up of the assessments conducted, which are as follows:</p> <ol style="list-style-type: none"> <li>1. Repair and reconstruction of the Mount Rinjani hiking trail and the evacuation route.</li> <li>2. Review SOP for Mount Rinjani Climbing</li> <li>3. Internalization and socialization the application of SOP for Climbing Mount Rinjani, Insurance, and eRinjani Applications.</li> </ol>	<p>Planning obtained from the results of the assessment includes:</p> <ol style="list-style-type: none"> <li>1. Development of supporting facilities in the form of toilets and places of worship which can now be used by tourists</li> <li>2. Moving and closing the previous parking lot or entrance to avoid conflict.</li> <li>3. Official opening and maximization of activities in 2020 after there was no conflict between communities and the end of Covid-19 pandemic.</li> </ol>	<p>Planning done on Bukit Selong is almost the same as Bale Adat, which is obtained from the results of the assessment which includes:</p> <ol style="list-style-type: none"> <li>1. Development of supporting facilities in the form of toilets and prayer rooms which can now be used by tourists</li> <li>2. Moving and closing the previous parking lot or entrance to avoid conflict.</li> <li>3. Development and repairment of damaged photo spots</li> <li>4. Official opening and maximization of activities in 2020 after there was no conflict between communities and the end of Covid-19 pandemic.</li> </ol>	<p>-Planning conducted in the recovery of this attraction is the construction of new attractions that opened in July 2019.</p> <p>-The next plan is to carry out promotional efforts to attract tourists.</p>

No.	Component of Recovery Efforts	Tourism Sites			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang <i>Glamour Camping</i>
		<ol style="list-style-type: none"> <li>4. Updating and upgrading eRinjani applications.</li> <li>5. Application of RFID Trekking Routes.</li> <li>6. Insurance integration with eRinjani application.</li> <li>7. Safeguarding illegal hiking trails by involving the parties.</li> <li>8. Repairing and upgrading the infrastructure facilities at the entrance to the Sembalun climbing lane as well as structuring special lane for <i>ojek</i> (a motorbike taxi) on the Sembalun climbing trail.</li> <li>9. Mount Rinjani National Park Office will impose an application for admission to the area for holidays by 150% from normal days in 2020.</li> <li>10. Facilitating institutional strengthening of Rinjani Tourism Image Forum, Rinjani Porter Guide Forum, and TO Association.</li> </ol>			
2.	Coordination	<p>The coordination was carried out by the Head of the Mount Rinjani National Park Office and the Head of the West Nusa Tenggara Province Tourism Office by involving:</p> <ol style="list-style-type: none"> <li>1. LHK Office of West Nusa Tenggara Province</li> <li>2. Kodim 1620 / Central Lombok</li> <li>3. Kodim 1606 / West Lombok</li> <li>4. Kodim 1615 / East Lombok</li> <li>5. East Lombok Police Station</li> <li>6. Sembalun Volcanology and Geological Mitigation (PVMBG) Center</li> <li>7. Basarnas Mataram</li> </ol>	<p>Coordination in the recovery of the Bale Adat tourism object was carried out by the Department of tourism of East Lombok Regency with the Head of Sembalun District and the Sembalun Lawang Tourism Awareness Group (Pokdarwis).</p> <p>The coordination discusses the provision of facilities and infrastructure and also discusses issues related to the pros and cons of tourism.</p> <p>But this coordination has not been carried out to the maximum because it does not involve the Bali-Lombok Cultural Heritage Conservation Center as the party that has the authority in the management of the Bale Adat.</p>	<p>Coordination in the recovery of the Bale Adat tourism object is carried out by Department of tourism of East Lombok Regency with the Head of Sembalun District and the Sembalun Lawang Tourism Awareness Group (Pokdarwis).</p> <p>The coordination discusses the provision of facilities and infrastructure, construction and repairment of damaged photo spots, and discusses issues related to pros and cons of tourism.</p>	<p>The coordination that was carried out focused on discussing the licensing for the opening of new tourism object. This coordination involved village staff and community groups.</p>

No.	Component of Recovery Efforts	Tourism Sites			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang <i>Glamour Camping</i>
		8. BMKG Climatology Station Class I West Lombok 9. BMKG Mataram Geophysics Station 10. BPBD of North Lombok Regency 11. Department of Culture and Tourism of North Lombok Regency 12. UNESCO Global Geopark Management Agency 13. Wahana Lingkungan Hidup Indonesia (WALHI) 14. Edelweis Medical Health Center (EMHC) 15. Association of Indonesian Mountain Guides (APGI) NTB 16. Representative of Rinjani Circle tourism service business operators			
3.	Damage Assessment	<ul style="list-style-type: none"> <li>- After an earthquake disaster, damage assessment conducted is to assess the impact of damage on the hiking trail, such as a broken trail, springs, gazebos, etc.</li> <li>- After an earthquake disaster, Mount Rinjani National Park Office has conducted a safety assessment of climbing on Mount Rinjani. The assessment includes determining an alternative route for evacuation in the event of a disaster returning to the hiking trail.</li> <li>- After more than one year of the earthquake disaster on December 27, 2019, there was an evaluation meeting of Mount Rinjani climbing tour and a discussion about the plan to close the Mount Rinjani climbing regularly. The things that become evaluations in climbing</li> </ul>	<ul style="list-style-type: none"> <li>- Conduct an assessment survey with a time span after six months of disaster, including an assessment of damage to buildings, facilities and infrastructure.</li> <li>- State and District Prosecutors Office involved in verification of damage data.</li> </ul>	Damage assessment was carried out by Pokdarwis Sembalun Lawang in the form of damages to photo spots and safety stairs to access to the Bukit Selong.	There was no significant damage assessment because the photo spots used by tourists were already unusable. More studies were conducted to assess the needs of earthquake-resistant tourism facilities.

No.	Component of Recovery Efforts	Tourism Sites			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang <i>Glamour Camping</i>
		<p>Mount Rinjani tourism are:</p> <ol style="list-style-type: none"> <li>1. There are still problems in using the eRinjani application for Mount Rinjani climbing registration.</li> <li>2. The application of SOP for Mount Rinjani Climbing and Insurance is not optimal and has not been well socialized to all parties.</li> <li>3. The availability of climbing tourism facilities and infrastructure is still lack and the function of the existing infrastructure is not optimal.</li> <li>4. There are still violations on Mount Rinjani climbing tourism activities such as illegal climbers (climbing at unauthorized times and locations) and the existence of motorcycle taxis on the hiking trail.</li> </ol>			
4.	Fund and Equipment.	Provision of funds and assistance for recovery equipment carried out by the Government and private sectors. The government includes the Ministry of Tourism, the Ministry of Environment and Forestry, and the National Disaster Management Agency.	Provision of funds and assistance with equipment for recovery was carried out by the East Lombok Regency Tourism Office through a Special Allocation Fund in the amount of Rp 485,000,000.	There is no financial assistance from the government but funds used for recovery are collected from user fees managed by Pokdarwis. The funds will be used for rebuilding or repairing damaged photo spots.	Overall funding needs are met by the private sectors.
5.	The Role of the Government During Recovery	The East Lombok Regency Government has anticipated disasters by issuing Regulation No. 3/2012. This Regulation is used in handling disasters in the East Lombok Regency. Simultaneously the regulation becomes a reference for the parties in preparing themselves to face a disaster. These agencies include the Regional Disaster Management Agency and BAPPEDA (Agency for Regional Development),	The East Lombok Regency Government, especially the Department of Tourism, has a role as a mediator of the conflict occurred.	The East Lombok Regency Government, especially the Department of Tourism, has a role as a mediator of the conflict occurred.	The role of the government is granting the tourism development license.

No.	Component of Recovery Efforts	Tourism Sites			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang <i>Glamour Camping</i>
		the Police and TNI (Indonesian National Armed Forces), Puskesmas (Community Health Center) and sub-district Health Centers, the Social and Transmigration Office, the Education Office, the SAR Unit, the Indonesian Red Cross, the Health Service, the Satpol PP (Municipal Police), and the Bakesbangpol (National Unity and Community protection agency).			

Based on the identification of the recovery process, it is found that each tourism object has gone through five components of the recovery efforts consisting of planning, coordination, damage assessment, fund and equipment, and the role of the government in recovery. The recovery processes in each tourism object depend on the owner of the highest interest in the tourist attraction. The achievement of recovery efforts that show very good physical results, namely Sajang Glamor Camping, where before the earthquake occurred in this tourist attraction is the Sajang Tree House whose management was carried out by the people of Sajang Village. After the earthquake disaster, the ownership of the Sajang Tree House is managed by a private party from the Bali Island. The recovery processes of these attractions have a short time, that is a year, it has been able to operate normally with complete facilities.

Mount Rinjani National Park (TNGR) is managed by the Mount Rinjani National Park Office under the Ministry of Environment and Forestry. Different from other tourism objects, the recovery processes in TNGR have a long time and a long process of planning, research, and coordination. The TNGR recovery efforts also involve many stakeholders with the recovery process not being completed until this survey is conducted. But some improvements have been made and showed results such

**Table 4.** Identification of Tourism Recovery Factors in Mount Rinjani National Park

Factor Group	Factors	Identification of the Factors in the Field			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang <i>Glamour Camping</i>
Economic Factors	Availability of recovery funds	In the implementation of efforts to restore climbing activities in the Mount Rinjani National Park, the availability of funds is one of the factors that support recovery efforts. It is because the recovery process is carried out through a	The availability of recovery funds is an important factor in efforts to recover damage to Bale Adat buildings. This is because there are 2 buildings that broken and several buildings that suffered damage to the walls and roof of Bale	The availability of recovery funds is an important factor in the recovery effort because of the large number of photo spots damaged by the earthquake disaster.	The availability of recovery funds is one of the important factors in the recovery effort of Sajang <i>Glamour Camping</i> . It is because this tourism object is undertaking the construction of

as the building of places of worship, shelters, and information signboards.

Recovery efforts on the Bale Adat and Bukit Selong tourism objects are managed by the Sembalun Lawang Village Community Group, but there are differences in the interests of the highest interests, namely at the Bale Adat tourism object, the highest interest holder is the Bali-Lombok Cultural Heritage Preservation Center. It is because the Bale Adat is one of the Cultural Heritage. But the conditions occurred that the management achievements show the same results because improvement efforts are only carried out by the community with the assistance of the East Lombok Regency Government.

**4.6 Factors that Influence Tourism Recovery**

Factor analysis was performed using a qualitative descriptive approach that compared the factors of deduction from theory to empirical conditions based on the results of interviews conducted with stakeholders on each tourist attraction. Interviews were conducted using factors obtained from the results of deduction theory consisting of economic factors, physical factors, social factors, and cultural factors. Following are the results of an analysis of the factors affecting the recovery of earthquake tourism.

Factor Group	Factors	Identification of the Factors in the Field			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang Glamour Camping
		long process and involves many parties so that the funds needed must be sufficient.	Adat.		new tourism objects so that it has a significant funding requirement.
Social Factors	The ability of managers to carry out efforts to restore tourist attractions	The geological conditions in the Mount Rinjani National Park are very extreme and there is damage to the cutoff of the hiking trail. Therefore, it takes special expertise to the manager or recovery agent to be able to survey and repair the hiking trail.	The main manager of the Bale Adat tourism object is the Bali-Lombok Cultural Heritage Management Center (BPCB), but for tourism activities, it is managed by Community Groups in Sembalun Lawang Village. At present, the efforts to restore physical damage to the Bale Adat building have not been carried out because there has been no response from the Bali-Lombok BPCB.	The management of Bukit Selong is carried out by the Sembalun Lawang Village Community Group. Recovery efforts are also carried out by the Community Group	Management is done individually, that is managed by the owner and employees without any assistance from the government
	Manager and community interaction with tourists	The management of the Mount Rinjani National Park involves many parties who have their own interests, and each interest will definitely emerge from the interaction of each stakeholder group. Interactions that occurred can be positive interactions but also interactions in the negative direction such as conflict management.	Good interaction between community groups and BPCB is an important factor to accelerate efforts to recover physical damage to Bale Adat.	Interaction is carried out between the community as managers and the government, namely the East Lombok Regency Tourism Office.	Interaction is made in the process of licensing the establishment of tourist attractions so that the interaction between the owner and the government is one important factor
	Collaboration on the role of government, private sector, and community	One of the recovery efforts undertaken in the effort to restore the Mount Rinjani National Park is the coordination stage. At this stage each party involved is required to be able to collaborate well in accordance with their respective interests so as to be able to support any recovery efforts.	Collaboration is one of the important factors in efforts to restore Bale Adat tourism. But in addition, not only the collaboration of the government and the community but also the collaboration between community groups is needed.	Collaboration is one of the important factors in the effort to recover tourism in Bukit Selong, but in addition, not only the collaboration of the government and the community but also the collaboration between community groups is needed.	Not Found
	Availability of NGOs	Non-governmental organizations play a large role in helping to restore tourism activities, NGOs function to empower tourism businesses and provide education related to disaster response tourism activities.	Not Found	Not Found	Not Found
	Procurement of trauma healing activities	Trauma Healing is carried out for all tourism businesses. It is because	Trauma healing is done but it is one of the sources of pros and cons	Trauma healing is done but it is one of the sources of pros and	Not Found

Factor Group	Factors	Identification of the Factors in the Field			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang Glamour Camping
		the impact of this earthquake disaster provides a fairly strong trauma for the tourism business actors as well as a sense of trauma for the tour guide or porter who is trapped in the hiking trail when the earthquake happened.	among community groups related to the existence of tourism activities.	cons among community groups related to the existence of tourism activities.	
	Procurement of training activities related to disaster response tourism to tourism object managers	Procurement of training activities is one of the important factors needed by tourism businesses to reduce the risk or impact of disasters. Moreover, this training activity can encourage recovery efforts and increase tourism business knowledge in making innovations related to earthquake-related tourism activities.	Not Found	Not Found	Not Found
	Community involvement in the recovery process	The community as a tourist business has an important role especially trekking organizer who understands the conditions of damage that happened in the Mount Rinjani National Park.	The management of tourism activities in the Bale Adat is carried out by the people of Sembalun Lawang Village, so that community involvement is a major factor in the running of tourism activities in the Bale Adat.	Community involvement is a major factor because the recovery of the Bukit Selong tourism object is managed by the Sembalun Lawang Village Community Group	Community involvement is an important factor in the development of attractions, because the development uses energy from the local community.
Physical Factors	Fulfillment of clean water supply	Fulfillment of clean water supply is one of the important factors because one of the impacts of the earthquake disaster is the loss of springs used by climbers.	Fulfillment of clean water supply is only needed for public toilets	Fulfillment of clean water supply is only needed for public toilets	Fulfilling clean water supply is very important to support the concept of accommodation offered at Sajang Glamour Camping.
	Accessibility Conditions in supporting the distribution of reconstruction materials	Accessibility is an important factor in distributing materials for reconstruction. It is because to get to the hiking trail must pass the road with steep cliffs and constrained cliffs that are prone to landslides and cover the road body.	Accessibility is an important factor in distributing materials for reconstruction. It is because to get to the location of tourist attractions must pass the road with steep cliffs and constrained cliffs that are prone to landslides and cover the road body.	Accessibility is an important factor in distributing materials for reconstruction. It is because to get to the location of tourist attractions must pass the road with steep cliffs and constrained cliffs that are prone to landslides and cover the road body.	Accessibility is an important factor in distributing materials for reconstruction. It is because for the location of attractions must pass the road with steep cliffs and constrained cliffs that are prone to landslides and cover the road body.
	The natural environment is a tourist attraction	The Mount Rinjani National Park has a well-known geological wealth, not only at the national level but has reached the foreign tourist market, so that the application of the geological environment in the Mount Rinjani	Not Found	The natural environments in the form of the Sembalun Caldera Wall and the expanse of rice fields are the main factors to attract tourists and promote Bukit Selong.	The natural environment factor is one of the attractions offered in developing the Sajang Glamour Camping tourism concept.

Factor Group	Factors	Identification of the Factors in the Field			
		Mount Rinjani National Park	Bale Adat	Bukit Selong	Sajang Glamour Camping
		National Park is a factor in attracting tourists or climbers to revive climbing tourism activities.			
Cultural Factors	The existence of customary norms or rules adhered to by the community	This cultural factor is a finding in the recovery effort in Mount Rinjani National Park, where the people in Sembalun District are still rich in customs. There are some customary rules that must be considered when implementing a recovery plan.	Bale Adat is a cultural heritage that is included in one of the Rinjani-Lombok Geopark cultural geosites, cultural attraction is the main attraction of Bale Adat.	Not Found	Not Found

Based on the analysis results of the factors that affect tourism recovery after the earthquake disaster on the four tourist attractions show that not all factors from the results of the deduction of the theory are found in all four attractions. The results of the analysis show the factors of tourism recovery found in all four attractions include:

1. Availability of recovery funds
2. The ability of managers to carry out efforts to recover tourist attractions
3. Interaction of managers and the public with tourists
4. Community involvement in the recovery process
5. Fulfillment of clean water supply
6. Accessibility conditions in supporting the distribution of reconstruction materials

The collaborative factor of the role of the government, the private sector, and the community as well as the procurement of trauma healing activities only affects tourism objects whose management is carried out by the National Park Office and the community is found on attractions managed by the private sector. Whereas the availability of NGOs and the provision of training activities related to disaster response tourism to object managers are only found in the recovery process of the Mount Rinjani National Park. Natural environment factors which become tourist attractions are not found in Bale Adat tourism objects because the main attraction of Bale Adat is cultural attraction.

In this research also found a new factor found in efforts to recover tourism after the earthquake disaster, namely the existence of cultural factors in the form of the existence of norms and customary rules called *awig-awig*. This factor is one of the influences in the efforts to restore the Mount Rinjani National Park and Bale Adat tourism objects.

**5. Conclusion**

Tourism performance on four tourism objects in Sembalun District shows different results. After the earthquake disaster, tourism objects managed by the private sector show a more significant increase in tourism

performance, while tourism objects managed by the community show the slowest increase in performance.

The recovery process for post-disaster tourism also varies based on the authority of the management. Tourism objects managed by the Ministry with potential geological conditions require a long recovery process with a damage review process and a long planning, and involve collaboration between many parties.

The tourism object that has the most recovery factors is the tourism object managed by the Ministry while the tourism object with the least recovery factor is the tourism object managed by the private sector.

This research can be a discussion related to the recovery processes in the post-disaster tourism sector that requires a different approach and shows different recovery results.

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