Pemetaan Resiko Bencana pada Obyek Wisat Desa Dalam Upaya Peningkatan Keselamatan dan Kenyamanan

Disaster Risk Mapping of Village Tourist Attractions in an Effort to Improve Safety and Comfort

Yusuf Adam Hilman[1*], Shahrum Shah Abdullah[2], Deny Wahyu Tricana[3], Meilia Gita Saskia[4], Larasati Kansa Widya Putri[5]

[15] Governmental Studies, FISIP, Universitas Muhammadiyah Ponorogo, East Java 63471, Indonesia.
[2] Universiti Teknologi Malaysia, Jalan Iman, 81310 Skudai, Johor, Malaysia
[34] Communication Studies, FISIP, Universitas Muhammadiyah Ponorogo, East Java 63471, Indonesia.
*Email koresponden: adam_hilman@umpo.ac.id

Abstrak
Kebersihan, kenyamanan, serta keamanan adalah hal penting bagi destinasi wisata, supaya layak untuk dikunjungi oleh para wisatawan, terkadang bencana menjadi salah satu penyebab kegagalan pengelolaan destinasi wisata, menjadi tidak aman dan kurang nyaman, sehingga perlu merencanakan mitigasi, pemetaan terhadap objek wisata di Desa Biting, Badegan, Ponorogo dilakukan karena kepemilikan 9 (sembilan) destinasi wisata yang dikelola berpotensi mengalami bencana, karena berupa wisata alam, melihat kondisi tersebut, tim kebencanaan dari Universitas muhammadiyah Ponorogo, bekerjasama dengan pihak desa kemudian melakukan beberapa kegiatan untuk mencoba membuat peta risiko bencana, hal tersebut selaras dengan tujuan kegiatan untuk mempersiapkan pengelola wisata menghadapi kejaidan bencana, metode yang memanfaatkan partisipasi komunitas, melalui beberapa tahap, yakni: 1). FGD dengan seluruh steakholder untuk membicarakan potensi bencana, 2). melakukan pemetaan bencana, dengan cara identifikasi kawasan rawan bencana, 3). membuat satuan tugas penanggulangan bencana, dengan memanfaatkan kelembagaan yang ada, 4). melakukan pemasangat peta bencana, dikawasan wisata. Dari kegiatan tersebut, diperoleh 3 (tiga) potensi yang paling dominan, yaitu: kebakaran hutan, longsor, dan banjir. Dari hasil pemetaan, upaya mitigasi dapat dilakukan untuk melengkapi struktur organisasi dan infrastruktur pendukung. Kami merekomendasikan untuk melakukan studi terkait kesiapan institusional dalam mempersiapkan diri menghadapi peristiwa bencana.

Kata kunci: Destinasi Wisata; Mitigasi Bencana; Desa Wisata;

Abstract
Cleanliness, comfort, and safety are important factors for tourist destinations to be worthy of visiting by tourists. Sometimes, disasters become one of the causes of failure in managing tourist destinations, making them unsafe and uncomfortable. Therefore, it is necessary to plan mitigation measures. A mapping of tourist attractions in Biting Village, Badegan, Ponorogo was conducted because the nine tourist destinations managed there have the potential to experience disasters. As these are natural attractions, the disaster management team from Muhammadiyah University of Ponorogo, in collaboration with the village authorities, undertook several activities to create a disaster risk map. This aligns with the objective of preparing tourism managers to respond to disasters, using a community participation approach through several stages: 1). FGD with all stakeholders to discuss potential disasters, 2). conducting disaster mapping by identifying disaster-prone areas, 3). establishing a disaster management task force by utilising existing institutions, 4). installing disaster maps in tourist areas. From these activities, three dominant potential disasters were identified: forest fires, landslides, and floods. Based on the mapping results, mitigation efforts can be undertaken to improve organisational structures and supporting infrastructure. We recommend conducting a study on institutional preparedness in preparing for disaster events.

***Keywords**:* Tourist Destination; Disaster Mitigation; Tourist Village;

INTRODUCTION

Tourism is one of the sectors that is able to provide income for the government both at the central, regional and village levels (Oktaviani, A. B., & Yuliani, E, 2023) (Chamalinda, K. S. N. L., & Rohma, F. F. 2023) (Rahma, A. A. 2020) (Ahmar, A., et, al. 2016) so that continuous efforts are needed related to good managerial, and professional, in order to maintain security, comfort, and sustainable destination development, this of course can affect the number of tourist visits which are a source of income. The readiness of tourist destination managers is sometimes inadequate and seems passive, so we often see conditions where tourist destinations are unable to create safety and comfort. Disaster is one of the threats related to efforts to create safety and comfort in tourist destinations, so sometimes we encounter destination managers who are not ready to face these threats, especially since many tourist destinations in Indonesia are of the natural tourism type, so the potential for disaster is always there. BPBD states that behind the tourist charm of various destinations, there is a potential disaster that threatens, so efforts are needed to overcome these problems (Arfani, M. 2022) (Priatmoko, S., & Purwoko, Y.2019) (Nugroho, S. P, 2019). BPBD made preparations at several points to face Nataru 2023 - 2024 to ensure safe conditions in various tourist areas in Indonesia (Abdul Muhari. 2024).

Biting Village is one of the areas included in Badegan District, Ponorogo Regency where the village has several tourist destinations, the majority of which are natural attractions, the location of the tourism object is directly adjacent to Wonogiri Regency, with the object name "*Mbiting Swarga kang Sinengker",* including: Rainbow Bridge, Sumorobangun Dam, Paragliding rides, Plered Hill (YA, Hilman,2024) (Khoirunnisa, K.,2024).

The readiness of destination managers is sometimes an obstacle in creating security and comfort, the problem arises because of financial limitations, lack of manager skills, and also low commitment together, this is the cause of not optimal tourist destinations in responding to challenges. This community service aims to increase the sense of security and comfort for visitors who come to tourist destinations, this is closely related to the existing conditions that are sometimes not friendly to visitors, there are always events that cause moral and material losses. Disaster conditions or events often arise unexpectedly. Some of the previous studies that we have compiled show that tourist destinations are related to disaster management, so it is important to research and also develop models (Rasyid, Z., et.al. 2023) (Suhartawan, B., et.al. 2025).

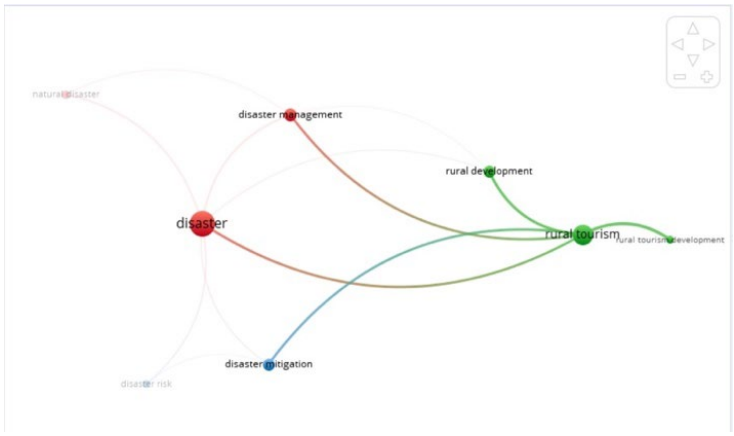


Figure 1 Linkage between village tourism and disaster mitigation
Source: data processed from nvivo

Problem Formulation

To what extent can the disaster mitigation model be applied to tourist destinations, so as to create a sense of security and comfort.

Research Objectives: 1) Knowing the extent to which the disaster mitigation model is applied to tourist destinations in order to create a sense of security and comfort. 2) Conducting an analysis related to disaster vulnerability in a tourist destination

Research Benefits: 1) Analysis related to disaster vulnerability in a tourist destination 2) Developing a disaster mitigation model in tourist areas 3) Contribute to similar or similar studies

METHODE

This community service aims to prepare tourism awareness groups in Biting Village, Badegan District, Ponorogo Regency to have skills in disaster mitigation, as part of the village government's efforts to improve the safety and comfort of visitors coming to tourist destinations. This activity is carried out in several stages, including: 1). Conducting Focus Group Discussions (FGD) related to disaster mapping involving tourism awareness groups (Pokdarwis) and also Village-Owned Enterprises (Bumdes), 2). Identifying potential disasters from tourism maps owned by the village, 3). Making disaster maps from the results of collecting questionnaires to tourism awareness groups (Pokdarwis) and also Village-Owned Enterprises (Bumdes), 4). Submission of disaster maps to the Biting Village government.

The flow or stages of activities can be explained through the flow diagram in Figure 2 regarding the process of mapping disaster-prone areas, to make it easier to understand the potential for disasters that could occur or have the potential to occur in the Destination Area in the Biting Village area.

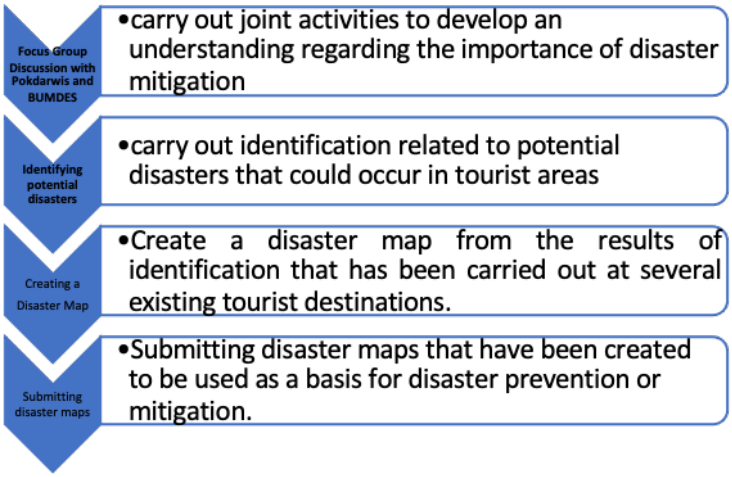


Figure 2 on the process of mapping disaster-prone areas
source: processed from community service activities

This activity was carried out over several periods of time, which was held in Biting Village, Badegan District, Ponorogo Regency, involving around 15 people consisting of village officials, BUMDES, Pokdarwis, as activity participants.

RESULT AND DISCUSSION

FGD with Pokdarwis and BUMDES

Focus Group Discussion is an initial step for all parties to sit together in an effort to align perceptions regarding the importance of disaster mitigation in tourist areas or at a tourist destination, so that from this activity all actors are committed to being involved and participating in improving the village's ability to prepare disaster mitigation efforts, as shown in Figure 3.

Identification of Potential Disasters

The next stage is to identify the tourist objects to be mapped, namely the risk of disasters that often occur or that may occur, we need to know that there are around 9 (nine) tourist objects, including: 1). Setono Panggonan site, 2). Aroma Therapy Tourism, 3). Rainbow Bridge, 4). Paragliding Hill, 5). Kucur Tourism Forest, 6). Semorobangun Dam, 7). Soeharto Hill, 8). Semorobangun Field, 9). Sumorobangun Flowers, as shown in Figure 4.

Creating a Disaster Map

Based on the existing tourist map, a mapping of potential disasters that may occur at any time is then made, so that it needs to be identified so that it is clear, the types of potential that may occur, from several observations and analysis results, several types of potential disasters were

found, namely: 1). Potential for forest fire disasters, 2). Potential for landslides and landslides, 3). Potential for flood disasters. The results of the community service show several potential disasters that can occur, according to table 1 below.

Table 1 Disaster Potential at Tourist Attractions in Biting Village, Badegan District, Ponorogo Regency

Tourist Location	Fire	landslide	Flodd
Kucur Tourism Florest	Level 1	Level 3	Level 3
Setono Pangonan	Level 1	Level 3	Level 3
Sumorobangun Dam	Level 3	Level 3	Level 2
Sumorobangun Field	Level 3	Level 3	Level 2
Sumorobangun Flowers	Level 2	Level 3	Level 3
Jembatan Pelangi	Level 3	Level 3	Level 1
Rainbow Bridge	Level 2	Level 3	Level 3
Paragliding Hill	Level 1	Level 2	Level 3
Soeharto Hill	Level 2	Level 3	Level 3

source: processed from community service activities

Informations:
Level 1: Very Vulnerable
Level 2: Vulnerable
Level 3: Not vulnerable

Based on the identification of potential disasters as shown in table 1, the team then created a disaster map, according to the conditions in the field, with the hope of providing a detailed explanation regarding disasters that might occur.

Handover of Disaster Maps

The results of the disaster mapping that have been made are then submitted to the Biting village government so that they can be used to complete the village inventory needs, to provide information related to the location or disaster-prone points in the Biting area, as shown in Figure 5.



Figure 3 on the process of mapping disaster-prone areas
source: processed from community service activities



Figure 4 Biting Village Tourism Map
source: processed from community service activities

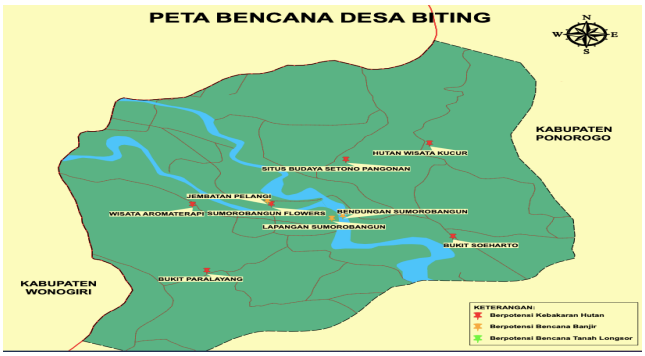


Figure 5 Biting Village Disaster Map
source: processed from community service activities

CONCLUSION

This activity has succeeded in creating a disaster map that specifically explains the potential for disasters that could occur in the Biting Tourism Village Area, such as: 1). Areas prone to fire, 2). Areas prone to landslides and landslides, 3). Areas prone to flooding. Through these efforts, the village can then prepare mitigation efforts in accordance with the potential disasters it has. We provide recommendations for further studies, to see the extent of the readiness of government and community institutions in preparing for disaster preparedness that could occur in the Biting Village Tourism Area, so that it can be handled properly and quickly.

ACKNOWLEDGMENTS

Thank you for the support from Universitas Muhammadiyah Ponorogo and Universiti Teknologi Malaysia who have supported the activities and completion of this article.

REFERENCE

Abdul Muhari. BNPB. (2024). No Title. Available from: https://www.bnpb.go.id/en/berita/bnpb-upayakan-wisata-aman-bencana-saat-libur-nataru

Adam Hilman, Y., Khoirurrosyidin, K., Yusdiawan Azhar, I., & Rivatul Mahmuddah, H. (2024). Penyusunan Rencana Mitigasi Bencana dalam Upaya Penguatan Kapasitas Pengelola Wisata Desa Biting Kecamatan Badegan Kabupaten Ponorogo. *Abdimas Indonesian Journal*, *4*(2), 21-26. https://doi.org/10.59525/aij.v4i2.343

Ahmar, A., Nurlinda, N., & Muhani, M. (2016). Peranan sektor pariwisata dalam meningkatkan pendapatan asli daerah kota Palopo. *Equilibrium: Jurnal Ilmiah Ekonomi, Manajemen dan Akuntansi*, *2*(1).

Arfani, M. (2022). Kolaborasi pentahelix dalam upaya pengurangan risiko bencana pada destinasi wisata di Desa Kalanganyar Sidoarjo. *Jurnal Syntax Transformation*, *3*(01), 104-120.

Chamalinda, K. S. N. L., & Rohma, F. F. (2023). Kontribusi pajak dan retribusi daerah di sektor pariwisata. *Jurnal Kebijakan Publik*, *14*(2), 140-148.

Khoirunnisa, K., Hilman, Y. A., Triono, B., & Ridho, I. N. (2024). Governance of Village Administration in the Development of the Tourism Sector in Biting Village, Badegan

District, Ponorogo Regency. *Jurnal Ilmiah Administrasi Pemerintahan Daerah*, *16*(1), 103-112.

Priatmoko, S., & Purwoko, Y. (2019). Mitigasi Bencana Daerah Tujuan Wisata Studi Kasus: Pentingsari, Nglanggeran, Penglipuran. *journal of tourism destination and attraction*, *7*(2), 99-106.

Rahma, A. A. (2020). Potensi sumber daya alam dalam mengembangkan sektor pariwisata di Indonesia. *Jurnal Nasional Pariwisata*, *12*(1), 1-8.

Rasyid, Z., Susanti, N., Harnani, Y., & Sohor, S. (2023). Sosialisasi "Less waste" dalam strategi Pengelolaan Sampah dan Pemberdayaan Masyarakat sebagai Bentuk Tindakan Peduli Lingkungan. *Jurnal Medika: Medika*, *2*(2), 74-82.

Suhartawan, B., Alfons, A. B., Tanwir, T., Anggraeni, D., Taba, H. H. T., Nuriah, Y., & Daawia, D. (2025). Pemberdayaan Masyarakat untuk Memenuhi Kebutuhan Air Bersih di Kampung Ifale Distrik Sentani Kabupaten Jayapura. *Jurnal Medika: Medika*, *4*(4), 987-992.

Nugroho, S. P. (2019). Rentannya Pariwisata dari Bencana. *Diakses dari https://www. bnpb. go. id/rentannya-pariwisata-dari-bencana*.

Oktaviani, A. B., & Yuliani, E. (2023). Dampak pengembangan pariwisata terhadap kondisi ekonomi masyarakat. *Jurnal Kajian Ruang*, *3*(1), 1-17.