Journal of Tourism, Hospitality and Sports
ISSN (Paper) 2312-5187 ISSN (Online) 2312-5179 An International Peer-reviewed Journal
Vol.62, 2022

Watu Payung at Turunan Geoforest Zoning Plan as Geotourist Safety Prerequisite Compliance

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Abstract

This article discusses safety as the most important factor to consider when visiting a conservation area. Uninspected paths and track aids, a lack of caution and unexpected natural conditions endanger safety. Watu Payung at Turunan Geoforest is a conservation area in Gunung Sewu UNESCO Global Geoparks. It has distinct appearance of dawn cloud ocean, but at northern sheer contours have the potential to endanger to visitors. This fact, as it has arisen, aims to obtain a safe zone boundary for geotourists and inform it as part of wayfinding map that requisites visibility of UNESCO Global Geoparks' mandatory. Data was collected using qualitative method of data analysis, included observation, documentation, in-depth interviews, and literature review. As a result, despite its location in an earthquake-prone area, Watu Payung at Turunan Geoforest benefits from karst plan's characteristics. Zoning is determined by characteristics of their geotourists, which includes those require assistance, self-tracker, and accompanied by certified track guards.

Keywords: conservation, geotourist, safety, signage, wayfinding map, zoning plan

DOI: 10.7176/JTHS/62-05
Publication date: December 30th 2022

1. Introduction

The tendency of people to choose recreation is currently shifting from indoor activities in urban areas to outdoor activities in natural areas. The pandemic has played a major role in this shift because it has brought awareness that spending time in personal dialogue with nature has brought many benefits. Mentally and spiritually able to train humans in how to respond to phenomena that occur more wisely, more gratefully, and more respectfully to nature. Physically living in an area that is still completely natural, it is necessary to spend enough time to be close to nature. To have a deeper introduction, along with the living, culture and population in the environment. This inclusivity provides deep, quality learning. The concept of life in this conservation area inspired the UNESCO Global Geopark with the birth of the concept of geotourism. The traveler merges with the native domination in the conservation area with his daily life and learns several things. Thus, the description of the difference between geotourism and tourism in general can be known.

In the teak forest conservation area, Giri Suko village where the Watu Payung natural attraction at Turunan Geoforest (WPTG) is located, residents are developing this geotourism concept. They do not expect large numbers of tourist arrivals apart from the limited capacity of WPTG. Mass tourism will damage nature, biodiversity, and culture because if the number of visitors is more than villagers, the management and supervision of this conservation area will be weak. The position of WPTG in an area of 17.4 hectares, see Figure 1 (a) which is located on the westernmost side of Gunung Kidul, the province of the Special Region of Yogyakarta see Figure 1 (b), is relatively close to the fault on the southern side of Java Island, making Yogyakarta prone to earthquakes and tsunamis. In fact, the earthquake on 27 May 2006 whose epicenter was in the depths of the soil in Bantul Regency resulted in the destruction of hundreds of houses and the loss of lives. That time there was no significant damage and no casualties at WPTG.

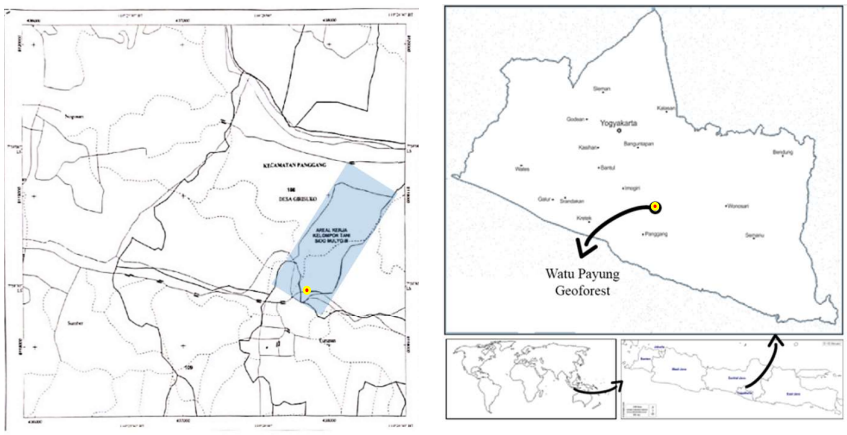

Figure 1. (a). Map of Watu Payung at Turunan Geoforest Area. (b). Watu Payung Part of Yogyakarta Special Region in Java Island in Indonesia

Since Gunung Sewu became a member of UGGps in 2015, 33 geosites and geoforests have participated, with WPTG being one of them. WPTG, as a member of the Gunung Sewu UGGp, must also follow the agreed-upon criteria since submitting the membership requirements. One of several requirements is the installation of geosite interpretation panels. The steep contours on the northern side of the Watu Payung at Turunan Geoforest area require information contained in the map way finding on the geoforest interpretation panels so that visitors can get information before exploring, particularly if they are interested in tracking to reach the Oya River, which is in the northern lowlands.

Visitors come with a variety of intentions and profiles. From the elderly to the young, men and women, to those who can walk normally and use assistive devices. People with disabilities have the same rights as those who are normal, according to developed countries around the world. This Geoforest manager can accommodate both by creating their own visibility program. The UNESCO Global Geoparks central board only provides what is required. Each member of the organization is given the opportunity to develop it. If visitors require a assurance of security and comfort, the manager must provide a roaming zone map. The map is intended to inform visitors with physical limitations, regular visitors, and visitors with special interests who wish to explore the zones.

2. Method and Material

Exploring about conservation is beneficial to humanity and safety, the qualitative analytical method is the proper option. According to Creswell's that most common method used by qualitative researchers to collect data is through documents, observations, interviews, and information from audiovisual as his definition (Creswell, 2014).

2.1 History of UNESCO Global Geoparks

It is well known that the world organization United Nations is quarters to several organizations. UNESCO is one

of them, it oversees education, science, and culture. The sub-organization for earth science is UNESCO Global Geoparks. The history of the institution is adapted from an article written in early 2000 by Ibrahim Komoo of Universitas Kebangsaan Malaysia. The UNESCO Division of Earth Sciences conducted an initial assessment of the UNESCO Geopark Development Programme. The study was carried out in response to a request from geographers in nations in need of a 'global conservation of earth heritage' program, such as the UNESCO World Heritage Sites program, which recognizes pre-eminent geological heritage areas that have not yet been explored and do not yet have a deeper conservation approach. Langkawi was proposed as a geopark in this study as an example of a geopark that meets the requirements. Furthermore, in April 2001, four European regions, namely the France represented by Reserve Geologique de Haute-Provence, Greece represented by Lesvos Petrified Forest, Spain represented by Maestrazgo Cultural Park and Germany represented by Vulkaneifelwhich promote geological conservation and sustainable development, established the European Geoparks Network (EGN) under the auspices of UNESCO. UNESCO contributes to the success of EGN, particularly in terms of developing guidelines for the establishment of geoparks in a country. UNESCO established the Global Geoparks Network in February 2004. (GGN). The establishment of 25 national geoparks from Europe and China as founding members of GGN. The Asia Pacific Geoparks Network (APGN) was proposed in November 2007 in Langkawi, and Germany's GGN Bureau officially accepted Malaysia in June 2008. The activities of the APGN were limited to promotional programs to encourage countries in Asia Pacific to establish a national level geopark program (Komoo, 2010).

Membership in national geoparks that already have a commitment to conservation, better educational activities, and proven economic growth from community empowerment can apply to increase the status of becoming a member of UNESCO Global Geoparks. Conservation must include three distinct features of diversity those are geodiversity, biodiversity, and cultural diversity. Number of geosites in Global UNESCO Geoparks Network with this year's additions, will be 169 geosites in 44 countriesby April 2021 https://en.unesco.org/global-geoparks/list. As a result, every geopark bearing the UNESCO Global Geoparks logo is always flanked by the GGN logo, and its motto is "celebrating earth heritage, sustaining local communities."

2.1 Gunung Sewu UNESCO Global Geoparks

As an archipelagic country, Indonesia has a rich geological heritage. The legacy has spread both on land and in the seas. The establishment of conservation areas demonstrates a strong desire to preserve it. According to Budi Martono, the Head of the Geopark Network. Indonesia currently has thirteen National Geoparks and eight UNESCO Global Geoparks as a form of conservation. These geoparks are housed in a container known as the Indonesian Geopark Network. Three of Indonesia's eight UNESCO Global Geoparks have completed the initial validation process for membership in this organization. Only one has passed the validation with a green card title, in the sense that it only strengthens a few things as the geopark's strength and there is no essential improvement note. Gunung Sewu UNESCO Global Geoparks (GSUGGp) is the name of the geopark. Gunung Sewu National Geopark was assembled as a UNESCO Global Geopark on August 21, 2015. The Gunung Sewu karst stretches 120 kilometers from Gunungkidul in Yogyakarta, Wonogiri in Central Java, to Pacitan in East Java (Haryono et al., 2017). Karst, which according to geological research was in the ocean as deep as 40 meters about 2 million years ago and was lifted to the surface, formed morphology such as hills, valleys, and topographic indentations see the Figure 2.

Gambar 1. Citra Kawasan Karst Gunungsewu (Haryono, 2011)

Figure 2. Gunung Sewu Karst Aerial View

This membership was formed by reaching an agreement with three ministers (Ministry of Energy and Mineral Resources, Ministry of Tourism, Culture, and Ministry of Primary – Secondary Education), three governors (Yogyakarta Special Region, Central Java, and East Java), and three Regents (Gunungkidul Regency, Wonogiri Regency and Pacitan Regency). On February 17, 2015, those government agencies mutually agreed to optimize and synchronize policies on the development and preservation of the Gunung Sewu Geopark to improve the welfare of the local community. The goal of the joint agreement is to realize the development of the Gunung Sewu Geopark with pillars in conservation, education, and community economic development. According to Budi Martono the General Manager, GSUGGp managed by a group of residents in collaboration with Village-Owned Enterprises for thirty-one geosites and two geoforest, rather than the Regents of Gunungkidul, Wonogiri, or Pacitan.

2.3 Watu Payung at Turunan Geoforest

Gunung Sewu's UNESCO Global Geopark geodiversity dominances are based ridges, caves, and beaches on thirty-one geosites. Wanagama and Watu Payung are the two remaining geoforests. The article focuses on the Watu Payung at Turunan Geoforest, which is located on the west side of Gunungkidul, specifically in Turunan Village, Girisuko Village, and Panggang District. This teak forest conservation area is a 700-person community forest development. Some residents live in Turunan village, while the rest migrate to work outside the village. The emergence of WPTG tourism objects is an additional product of this community forest work program, which focuses on biological diversity as its primary strength, followed by geological and cultural diversity. Following the biological diversity of the teak forest comes the diversity of cultural legends, such as the legend of Jaka Tarub and the fairy angels.

WPTG for the Government, which is considered to have privileges for its development potential. This is demonstrated by the provincial government's support in the form of several artworks created by the crafts specialist Wisnu Ajitama. Every craft made by Wisnu must have philosophical background and be in harmony with the environment. Goro-goro, Hasta Apsari, and Andum Tuntum were the names of the crafts he made there (Ajitama, 2018). Aside from crafts, there is traditional music culture, specifically the performance of Gejok Lesung traditional music during the full moon.

The legend behind the name of Watu Payung is that in the early 1800s, when Ki Dolog and Nyi Tandur, along with their beloved daughter, lived in the middle of the forest. It was the era of the Demak Kingdom, and an odyssey of Raden Joko Omyang as one of the kingdom's sons took him to the Turunan area, where he met Ki Dolog's family. Raden Joko Omyang attracted with Ki Dolog's daughter after seeing her beauty and intending to marry her to become his wife. Raden Joko Omyang lived and raised his family in the descent area day after day, until one day it became customary for knights to step aside to seek guidance and gratefulness for life. And Joko Omyang track down a cave in which he meditated, later known as Goa Pertapaan. At the end of his hermitage, he emerged from Goa Pertapaan and rested while admiring the beauty of nature created by the Almighty from a location on the east side of Goa known as Gajah Mopo. The thirst he felt compelled him to seek out a spring. From afar, he noticed a large rock with a puddle of water on it, known as Tompak Watu. Then Joko Omyang drank the water to quench his thirst and expressed his hope that this location would bring prosperity to the local people (Javanese term: Mayungi). Joko Omyang then prostrated himself on the west side with a stone floor, which became known as Pasujudan Susuh Angin, which is interpreted to process and return the heart to the Creator. In addition, the Tompak Watu is a place to drink and prostrate Joko Omyang, now known as Watu Payung, as an umbrella for each other, working together to build and cultivate a better and prosperous life.

This geoforest has a specific visiting time to enjoy natural attractions, specifically the cloud ocean phenomenon, which can be enjoyed from dawn to sunrise as shown in the Figure 3 (a). On a full moon night, the ocean of clouds can be enjoyed as early as 3 a.m. When the ocean of clouds disappears at 8 a.m. and the valley and Oya River appear as shown in the image, this geoforest will look like any other conservation forest see Figure 3 (b). Visitors with specific interests can venture or who enjoy tracking down the hill after the cloud. Tracker who come across could herd of long-tailed macaques before reaching the Oya River, which is another biological potential in this teak forest. Habitat of hundreds long-tailed macaques. Every year, the District Forestry Service must capture several of these macaques to suppress the breeding rate and avoid disrupting the local community's agriculture, according to Mr. Endarto, the Manager of Watu Payung at Turunan Geoforest.


(a) (b)

Figure 3. (a). Ocean Cloud at dawn, taken from Hasta Apsari environmental artwork photo capture point. (b). Same spot as Figure 3 (a) at daytime shown The Oya River at northern of Hasta Apsari.

The WPTG manager oversees facilities such as entrance gates, parking lots, trail tracks, tourist offices and information, as well as the sale of souvenirs, food, and beverages. Joglo, a traditional shelter located behind the WPTG's limestone icon, with toilets, a praying room, and an archery range. Photo spot at Andung Tuntum, Hasta Apsari, Asta Laksita, Goro-goro also swing spot. Bench with hut, hand wash water tap, sign system, and trash bin. On the north side of the trail track thera are The Gatotkaca cave, Watu Split Tunnel, the Hermitage cave, the Banyunibo waterfall, and the road through the Oya River can be found. These features can be accessed via the WPTG's existing wayfinding map or the interpretation panel.

(a) (b)

Figure 4. (a) Stacking limestone known as Watu Payung as the icon Watu Payung as the icon behind it is Limasan meeting point. (b) Current wayfinding map of Watu Payung at Turunan Geoforest as interpretation panels

Mesmerizing ocean cloud phenomenon in dawn, as well as the potential for tourism development in this preserve forest, have been acknowledged in scientific papers about tourism. Preserve forests, natural scenery, flowing rivers, as well as culture and natural products, can all be attractions. The thing that needs to be improved is that because of the location of the WPTG that enters the forest, even though it is equipped with a 4-wheeled vehicle road suitable for traversing, this location will be frequented through if it is equipped with a sign system with a clear message (Mulia, 2019).

2.4 Geotourism

Tourism in historical sites, museums, recreational areas, and shopping centers differs from tourism in conservation areas, particularly conservation areas that have joined UGGps – GGN. China is home to 41 of the 169 conservation areas managed by UGGps members. This statistical data can be used to understand why the Chinese government views this potential as one that must be prioritized for development. A group of Chinese geologists gathered in China's Association for Tourism Earth Science was founded in 1985. Geotourism, or Tourism Earth Science, has been named by geoscientists. It defines Tourism Earth Science as "a newly emerging interdisciplinary science that aims to investigate, study, plan, develop, and protect tourism resources by applying its theories and methodology."

An Introduction to Tourism Earth Science (written by Anze Chen and Yunting Lu et al.) further refined the definition in 1991 as "a relatively new branch of science regarding earth, a branch of study concerned with travel and sightseeing relationships, therapeutic recreation and leisure therapy to the composition and structure of the materials on the earth's surface and their energy migration and change, which includes both geological as well as geological processes and geographical tourism environments." Tourism Earth Science is a a colloquial term for two distinct disciplines: geoscience and tourism. In 2013, this definition was expanded by the Grand Tourism Earth Science Dictionary to "a newly emerging, interdisciplinary science developed by combining earth science and the tourism industry, comprising two sub-disciplines, tourism geology and tourism geography." Theories and methods of Earth science, in addition to other disciplines such as art, aesthetics, landscape, and environmental and tourism sciences, are used to address environmental tourism issues. These difficulties were primarily caused by the tourism industry, planning, resources, management, and development." (Chen, 2020)

2.5 Ridge Morfologi

According to the morphological map of Gunung Sewu shown previously, this area has a variety of high-low surface characteristics. A sheer cliff starting from the Joglo meeting point area and then heading towards Hasta Apsari photo spot to the north side and ceasing the Oya River was captured using a drone. The height varies of this preseve forest, resulting in mesmerizing and enchanting views. Figure 6 depicts of contoured area as seen from north to south, while Figure 7 depicts it as seen from south to north.

(a) (b)

Figure 6. (a) Aerial photo shoot on WPTG from south to north view. (b) The view from the north to south of WPTG.

2.6 Map of Earthquake, Fault and Karst

Active magma chamber in the earth's core, causes volcanic eruptions and crustal shifts with volcanic and tectonic earthquakes. Various related studies are still being conducted to reduce the risks posed by earthquakes. Adapting research on the implications of megathrust earthquakes and tsunamis caused by seismic gaps in the south of the island of Java, he stated seismic slow slip events that do not manifest seismically may cause gaps, and the recent 8 Mw earthquakes in 1994 and 2006 the Java Trench may represent the upper limit of earthquake size. However, considering recent megathrust events such as the Sumatera earthquakes of 2004 and the Tohoku earthquakes of 2011, by using historical recordings or models to calculate maximum moment release can result in conservative estimates, and All subduction zones of sufficient length should be regarded as potential megathrust earthquake hosts. A recent study discovered tsunami deposits at many locations along the coastline facing the Java Trench, which supports the Java Trench's potential in this regard, leading the authors to conclude that megathrust earthquakes have a 500-year recurrence period. As a result, we believe our models depict a plausible scenario, however we recognize that slow slip and the complexities in the relationship between slip deficit and earthquake rupture may also play a role in determining the likelihood of future large earthquakes (Widiyantoro et al., 2020).
The Ministry of Public Works and Housing's Center of Research and Development believes that it is necessary to anticipate obliteration because an earthquake cannot be avoided and cannot be predicted when it will occur. According to research on major earthquakes that occurred in Indonesia over the last two decades, such as the 2006 Yogyakarta earthquake (Mw = 6.3), the Padang earthquake (Mw = 7.6) in September 2009, and the most recent Pidie Jaya earthquake in Aceh in December 2016 (Mw = 6.5). Figure 8 the illustration depicts the potential magnitude of the earthquake. The earthquakes that occurred in the last decade caused fatalities as well as material losses that harmed the economic and development sectors. According to BNPB as National Disaster Management

Board and UNISDR data, the economic losses from 2004 to 2010 ranged from US$ 39 million to US$ 4.7 billion, resulting in more than 250,000 fatalities. Fault in Opak Following the earthquake in Yogyakarta in 2006, the existence of the Opak fault became a source of concern. This fault is thought to have caused the Yogyakarta earthquake. The seismic record shows a sinistral shear movement as the fault movement mechanism. The Opak Fault Zone itself is an elongated escarpment that runs southwest-northeast before turning east and joining the now-defunct Batur Agung up-fault system (Pustlitbang PUPR, 2017).

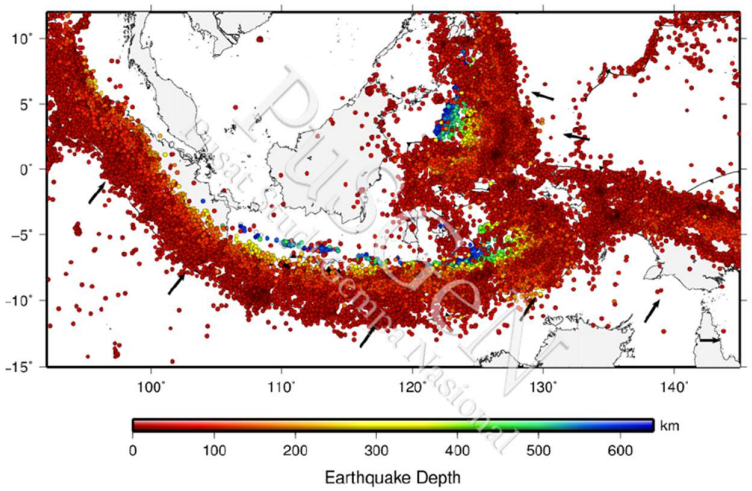

Figure 8. Earthquake depth

Researchers from Japan conducted another study to investigate the effects of the 2006 earthquake. The image classification technique is used to detect areas covered with bricks (damaged buildings) and areas covered with roof tiles in post-earthquake QuickBird images based on a field survey for the spectral reflectance of surface materials, according to some of the findings (undamaged buildings) see Figure 9. The Damage Index (DI) is calculated from the classified images to assess the distribution of building damage. The terribly damaged areas are not limited to Bantul and Imogiri, which are close to the epicenter, but also in Gantiwarno, a southern part of Klaten that is 20-30 kilometers away from the epicenter. The damage statistics are compared to the DI distribution in the field survey (Miura et al., 2007).

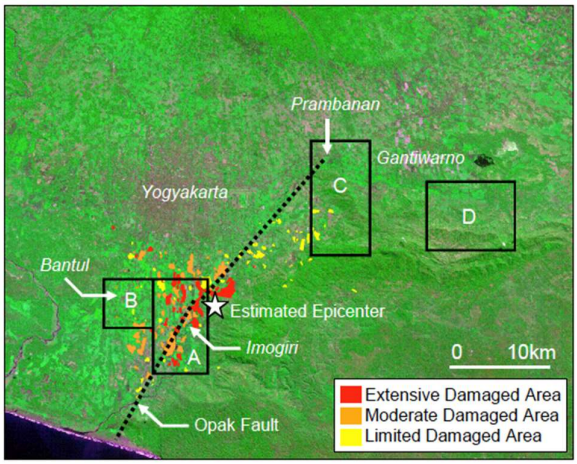

Fig. 1 Coverage of QuickBird images (A-D) and damage distribution estimated by UNOSAT(2006) overlaid on ASTER image.

Figure 9. Coverage of Quickbird images (A-D) and damage distribution estimated bu UNOSAT (2006) overlaid on ASTER image

The WPTG, which is east of the Opak fault, is also located at the western end of the Gunung Kidul district's karst area. Several studies have shown that Gunungkidul is not lack of water; on the contrary, it has a large amount of water stored inside cave of the karst. In the rainy season, as evidenced by the occasional waterfall. This is a simple example based on facts about more complex and widespread karst, specifically karst in China see Figure 10. Certain tunel construction process which must pass through the karst encounters obstacles due to the condition of in karst's water reservoir. Karst areas account for approximately one-third of China's total land area, particularly in southwestern China's Yunnan, Guizhou, Guangxi, Sichuan, Hubei, and Hunan. Tunnels, hydropower stations, and inter-basin water transfer have all been built in karst areas because of the west's rapid development. During underground engineering construction, geological hazards, such as water inrush, rock burst, collapse, and mud gushing, may be encountered. The most dangerous geological hazard is water inrush (Li et al., 2016).

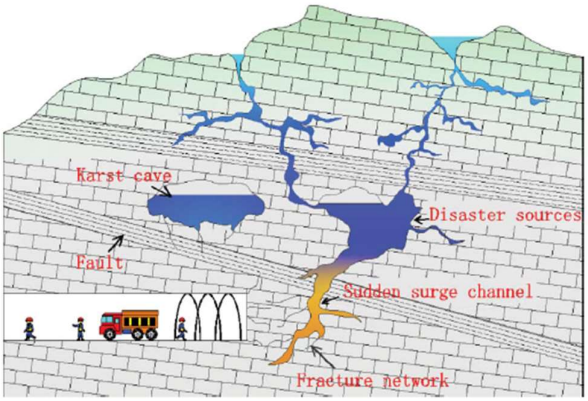

Figure 10. China karst section

2.7 Visibility

Visibility is one of six criteria in the application file to become a member of UGGps. Permanent signage at museum and information center entrances, geosite interpretation panels, entrance gate, walkway panels, diectional signs, education panels, leaflets, publications, websites, social media, and so on are examples of this (Geoparks, 2018). To increase the number of geosites and geoforests, as well as the economic benefits of geotourism, several factors must be considered. Nglanggeran, an ancient mount volcano located in Gunungkidul's northern west area, is one of 44 tourist villages worldwide in UNWTO's Best Tourism Village 2021 list. This accomplishment was made possible because Nglanggeran, in addition to complying the visibility criteria for UGGPs, has also comply the dimensions set by the United Nations through the World Tourism Organization (UNWTO). There are seven dimensions to accessible information: printed materials, digital documents, audio visual content, websites, applications, self-service terminals and mobile devices, and signage (UNWTO, 2016). Tourism encompasses a broader range of activities than geotourism. When it comes to attracting tourists, the management of a destination should think about these seven dimensions. The complete accessibility of shopping malls as a tourist destination has become a research topic. The essence of the research, which focuses on malls in Jakarta, reveals accessible information concept is only partially implemented in all the shopping malls studied. Websites and signage are the most widely used dimensions. All eight shopping malls have these two dimensions, and while some have basic websites and signage, they can still provide visitors with useful information. Self-service terminals and mobile/smart devices on the other hand are the least implemented dimensions. When shopping malls make the best use of this dimension, it can be very beneficial for tourism information accessibility (Lestari et al., 2020).

Signage and wayfinding are mentioned in the UNWTO's dimensions and UGGps visibility criteria. It should be noted that there is a complex process behind the simplicity of signage and wayfinding display. The process of navigating to a destination in a familiar or unfamiliar environment by using cues provided by the surroundings is known as wayfinding. The interaction of human and environmental factors is critical to the process's success. Spatial orientation, cognitive mapping abilities, route strategies, language, culture, gender, and biological factors are used to develop plans and make decisions based on information obtained from paths, nodes, landmarks, districts, maps, and signs about an environment. These decisions must be transformed into actions to reach a desired destination, and decision-making and execution necessitate individuals matching the representation of the environment with the environment itself. While cognitive and computer scientists are interested in understanding the interplay of human and environmental factors required to facilitate wayfinding, there are other reasons to

investigate wayfinding.

Research of wayfinding has identified the factors that influence wayfinding, and environments can be designed to aid in wayfinding. Recent technological advances have the potential to improve navigation. Increased use and availability of mobile devices and smart phones could be one solution. Downloadable apps could be made available to terminal users in the context of an airport terminal. These apps could detect the user's current location and show them the best route to a specific location, such as the restrooms, the next activity center, or the required gate. The use of mobile phones in airport and airline operations is not a new phenomenon: the International Air Transport Association's e-travel vision for Bar Coded Boarding Passes (BCBP) allows passengers to access flights via their mobile phones and a scannable bar code displayed on their screens. The wayfinding app could be thought of as a supplement to initiatives like the BCBP (Farr et al., 2012).

2. Result and Discussion

WPTG which is located near a fault zone with the potential for an earthquake, has advantage since its situated in the karst area. It has been demonstrated that when a large earthquake struck Bantul in 2006 WPTG, which is located within an 8-kilometer radius, there was no significant damage or casualties. After math, the position stacking limestone as WPTG icon remains stiff. The land's character, which is dominated by karst rocks, forms many caves profounds that can contain water. The flow of water does not have to be a cause for concern, it is still within a safe approximation when compared to the water inrush that has occurred in China.

The high and low points of this area can be seen by using a program that detects the dimensions of the outer earth's layer. The data produced shows the highest point on the south side at 291 meters above sea level and the lowest point in the northern region at 73 meters above sea level. The average length of the area is 800 meters, and the average width is 400 meters. The contour is determined using a section sample by drawing a line from (1) the area's entrance point to the north, (2) a straight line that touches Watu Payung, Joglo, Hasta Apsari art work, and (3) a straight line from the exit to the north. These three lines run parallel to one another. Here's the result:

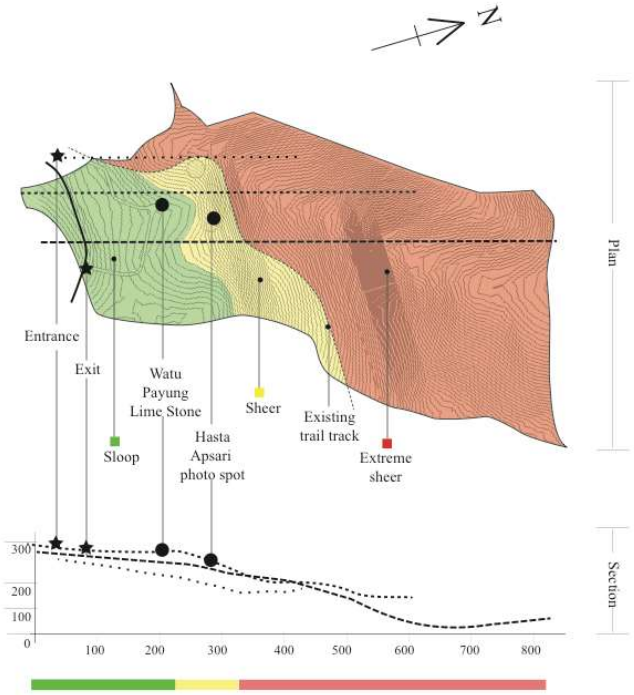

Figure 11. Zoning classification based on physical condition of visitor

After sketching the top view and contour section slices of the WPTG area with a height difference of up to 118 m and length from the 800m long area. In certain parts there is a sheer and dangerous transition of the ground level.

This condition does not allow all visitors to explore the area thoroughly. In this case, it is necessary to classify based on the physical condition of visitors and be informed in visually as stated in the UGGps visibility criteria and UNWTO accessibility dimensions format. The appropriate format is zoning information on way finding maps, sign systems and applications on smart phones or official social media from WPTG.

3. Conclusion

According to the above description, the WPTG earthquake-prone zone is not a zoning range top priority. A zoning system is made based on the diversity of visitors. Visitors with special interests who are equipped with adventuring devices and are accompanied by a guide are permitted to enter the red zone. The yellow zone is for general visitors who do not have any tools or assistance. Underage and visitors with walking aids have a green zone. This zoning must be informed in a way that locates a map of the area's visibility and becomes a feature menu in a smart phone application. The advantage is that risks are avoided, especially for those who require mobility aids and underage.

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